Transcript Exhibit(s)

Docket #(s): L-00000V-02-0119-00000

Exhibit # : A5, A6

EXHIBIT
A-5
admitted

Environmental Assessment

HASSAYAMPA TO JOJOBA
500kV TRANSMISSION LINE PROJECT




U.S.D.I. Bureau of Land Management
Phoenix Field Office

FEBRUARY 2003

FINDING OF NO SIGNIFICANT IMPACT

Name of Environmental Assessment: Hassayampa to Jojoba Transmission Project
Environmental Assessment No.: AZ-020-2002-0114
Case File No.: AZA-31468
Bureau of Land Management Office: Phoenix Field Office, Arizona

Finding of No Significant Impact: Upon review of the Environmental Assessment (EA) prepared for the above-named project and incorporated herein by reference, no significant long-term impacts on the human (socioeconomic) or natural environment would result. Short-term, temporary impacts on soils, water resources, biological resources, cultural resources, air quality, noise, and land use associated with construction activities of the proposed transmission line were identified which could be reduced by mitigation, and therefore are not considered significant. Long-term impacts on scenic quality were considered low to moderate, while the potential for long-term residual collision hazard for birds was considered low.

Recommendation: Grant a right-of-way to Gila Bend Power Partners (GBPP) for construction and operation of one (1) 500kV transmission line connecting the Hassayampa Switchyard, located approximately 1 mile south of the Palo Verde Nuclear Generation Station (PVNGS), to the proposed Jojoba Switchyard located on Arizona State Trust land approximately 20 miles to the south-east in Maricopa County, Arizona. The right-of-way, as it effects BLM administered land, would be 200 feet wide and approximately 6.8 miles long. Gila Bend Power Partners would implement the recommended Standard Operating Procedures and Mitigation Measures listed in Attachment A. The transmission line would be owned and operated by Gila Bend Power Partners, LLC.

Stipulations: Gila Bend Power Partners is to implement the recommended Standard Operating Procedures and Mitigation Measures listed in Attachment A. Compliance with stipulations and mitigation measures will be monitored during project implementation. BLM issuance of the right-of-way is conditional upon GBPP obtaining all other federal, state, and local permits required to construct and operate the Line. GBPP has applied for and is required to obtain a Certificate of Environmental Compatibility from the Arizona Corporation Commission. The Phoenix Field Office has fulfilled requirements in accordance with the Section 106 process regarding cultural resource issues, and requirements regarding biological resource issues.

Rationale: The EA for the Proposed Action has been prepared in accordance with National Environmental Policy Act (NEPA) requirements, including the public involvement procedures prescribed by 40 CFR §1506.6. The project design and mitigation measures proposed in the EA are integral to the Proposed Action, and would reduce short-term and long-term environmental impacts to a level of insignificance. Issuance of right-of-way application number AZA-31468 to GBPP for the construction and operation of an electric transmission line is consistent with the Lower Gila South Resource Management Plan (BLM 1988; which defines land uses along the Palo Verde to Kyrene Utility Corridor).

Recommendation of Finding: _____ Project Manager — 02/11/03 Date

2/11/03
I concur:

Approval of Finding: _____ Field Manager — 2/11/03 Date

DECISION RECORD

Serial No.: AZA-31468
EA No.: AZ-020-2002-0114

Decision:

It is decided that Gila Bend Power Partners (GBPP) be granted a right-of-way by the Bureau of Land Management (BLM) 200 feet wide and approximately 20 miles long, including the rights to design, construct, operate and own one (1) 500 kilovolt (kV) transmission line connecting the proposed Hassayampa Switchyard, south of the Palo Verde Nuclear Generating Station, to the proposed Jojoba Switchyard located on Arizona State Trust land approximately 20 miles to the south-east in Maricopa County, Arizona.

The entire right-of-way, as it effects BLM lands, is within a designated BLM utility corridor known as the Palo Verde to Kyrene Utility Corridor.

Rationale for Decision:

The Proposed Action is consistent with the Lower Gila South Resource Management Plan (BLM 1988) which promotes utility development within approved corridors (Palo Verde to Kyrene Utility Corridor) dedicated to the use and construction of structural facilities such as the Hassayampa to Jojoba 500 kV Transmission Project.

The Proposed Action will provide needed electrical power to Arizona, which is currently projected to have an electricity shortfall. Potential environmental impacts of the Proposed Action have been addressed through the incorporation of project design, construction, and operation measures. Upon implementation of the attached operating procedures and mitigation measures, short-term and long-term environmental and human (socioeconomic) impacts identified in the Environmental Assessment would not be significant. Compliance monitoring would be conducted to ensure that these mitigation measures are properly implemented and that sensitive resources are protected.

Standard Operating Procedures and Mitigation Measures:

See Attachment A.

Field Manager

Date 2/11/03

ATTACHMENT A

Standard Operating Procedures and Mitigation Measures

Standard Operating Procedures

1. All construction vehicle movement outside of the right-of-way will be restricted to predesignated access, contractor acquired access, or public roads.

2. The limits of construction activities will typically be predetermined, with activity restricted to and confined within those limits. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits. The right-of-way boundary will be flagged in environmentally sensitive areas described in the final plan of development to alert construction personnel that those areas should be avoided.

3. In construction areas where recontouring is not required, vegetation will be left in place wherever possible to avoid excessive root damage and allow for resprouting.

4. In construction areas (e.g., marshalling yards, structure sites, spur roads from existing access roads) where ground disturbance is significant or where recontouring is required, surface restoration will occur as required by the landowner or land-management agency. The method of restoration will typically consist of returning disturbed areas to their natural contour (to the extent practical), reseeding or revegetating with native plants (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches. Seed must be tested and certified to contain no noxious weeds in the mix by the State of Arizona Agricultural Department. Seed viability must also be tested at a certified laboratory approved by the authorized officer.

5. Only the minimum amount of vegetation necessary for the construction of structures and facilities shall be removed. Topsoil will be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation.

6. The holder shall trim trees in preference to cutting trees and shall cut trees in preference to bulldozing them as directed by the authorized officer.

7. Watering facilities (e.g., tanks, developed springs, water lines, wells, etc.) will be repaired or replaced to their predisturbed conditions are required by the landowner or land management agency, if they are damaged or destroyed by construction activities.

8. Prior to construction, all construction personnel will be instructed on the protection of cultural, paleontological, and ecological resources. To assist in this effort, the construction contract will address (a) federal and state laws regarding antiquities, fossils, and plants and wildlife including collection and removal; and (b) the importance of these resources and the purpose and necessity of protecting them.

9. Impact avoidance and mitigation measures for cultural resources developed in consultation with BLM and the State Historic Preservation Officer will be implemented.

10. The project sponsors will respond to complaints of line-generated radio or television interference by investigating the complaints and implementing appropriate mitigation measures. The transmission line will be patrolled on a regular basis so that damaged insulators or other line materials that could cause interference are repaired or replaced.

11. The project sponsors will apply necessary mitigation to minimize problems of induced currents and voltages onto conductive objects sharing a right-of-way, to the mutual satisfaction of the parties involved.

12. All construction and maintenance activities shall be conducted in a manner that will minimize disturbance to vegetation, drainage channels, and intermittent and perennial streambanks. In addition, all existing roads will be left in a condition equal to or better than their condition prior to the construction of the transmission line.

13. Construction holes left open over night shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.

14. During construction, water shall be applied for the purpose of dust control.

15. All requirements of those entities having jurisdiction over air quality matters will be adhered to and any necessary permits for construction activities will be obtained. Open burning of construction debris (cleared trees, etc.) will not be allowed on BLM administered lands.

16. Fences and gates, if damaged or destroyed by construction activities, will be repaired or replaced to their original predisturbed condition as required by the landowner or the land management agency. Temporary gates will be installed only with the permission of the landowner or the land management agency, and will be restored to their original predisturbed condition following construction.

17. The proposed hardware and conductor will limit the audible noise, radio interference (RI), and television interference (TVI) due to corona. Tension will be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution will be exercised during construction to avoid scratching or nicking the conductor surface, which may provide points for corona to occur.

18. During operation of the transmission line, the right-of-way will be maintained free of construction related non-biodegradable debris.

19. Totally enclosed containment will be provided for all debris. All construction waste including debris, litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials will be removed promptly to a disposal facility authorized to accept such materials.

20. Structures will be constructed to conform to "Suggested Practices for Raptor Protection on Power Lines" (Raptor Research Foundation, Inc. 1981).

21. Species protected by the Arizona Native Plant Law will be salvaged. A salvage plan approved by the BLM will be included in the specific plan of development. Generally, salvage may include:
    - removal and stockpiling for replanting on site
    - removal and transplanting out of surface disturbance area
    - removal and salvage by private individuals
    - removal and salvage by commercial dealers
    - any combination of the above

21. The alignment of any new access roads or overland routes will follow the designated area's

landform contours where possible, providing that such alignment does not additionally impact resource values. This would minimize ground disturbance and reduce scarring.

22. All new access roads not required for maintenance will be permanently closed using the most effective and least environmentally damaging methods appropriate to that area with concurrence of the landowner or land manager (e.g., stock piling and replacing topsoil, or rock replacement). This would limit access into the area.

23. In designated areas, structures will be placed or rerouted so as to avoid sensitive features such as, but not limited to, riparian areas, watercourses, and cultural sites, or to allow conductors to clearly span the features, within limits of standard tower design.

24. Transmission line structures will comply with Federal Aviation Administration Guidelines to minimize aircraft hazards (Federal Aviation 77).

25. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

Desert Tortoise Mitigation Measures

1. A desert tortoise protection education program shall be presented to all employees, the project site. The education program shall include discussions of the following:
   - legal and sensitive status of the tortoise
   - brief discussion of tortoise life history and ecology
   - mitigation measures designed to reduce adverse effects to tortoises
   - protocols to follow if a tortoise is encountered, including appropriate contact points.

2. A desert tortoise monitor (qualified desert tortoise biologist) will be required when constructing within Category I and II tortoise habitat. The biologist shall watch for tortoises wandering into construction areas, check under vehicles, check at least three times per day any excavations that might trap tortoises, and conduct other activities necessary to ensure that death and injury of tortoises are minimized.

3. Protocols for dealing with any tortoises found in project areas shall be in accordance with Arizona Game and Fish Departments *Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects*, revised January, 1997.

4. a. Vehicle use shall be limited to existing or designated routes to the extent possible.
   b. Areas of new construction shall be flagged or marked on the ground prior to construction. All construction workers shall strictly limit their activities and vehicles to areas that have been marked. Construction personnel shall be trained to recognize markers and understand the equipment movement restrictions involved.

5. Construction sites shall be maintained in a sanitary condition at all times. The project proponent shall be responsible for controlling and limiting litter, trash, and garbage by placing refuse in predator-proof, sealable receptacles. Trash and debris shall be removed when construction is complete.

6. All features that can entrap tortoise (i.e., trenches, pits, and other features) in the project area shall be checked twice daily (morning and afternoon) for trapped desert tortoise.

7. During and after completion of the project, trenches, pits, and other features in which tortoises could be entrapped or entangled, shall be filled in, covered, or otherwise modified so they are no longer a hazard to desert tortoise.

8. All dogs in the project area shall be on a leash.

Other Mitigating Measures

9. All applicable regulations in accordance with 43 CFR 2800.

10. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the Plan of Development (POD) dated February, 2003 and made part of the grant. Any relocation, additional construction, or use that is not in accord with the approved POD, shall not be initiated without the prior written approval of the authorized officer. A copy of the complete right-of-way grant, including all stipulations and approved POD, shall be made available on the right-of-way area during construction, operation, and termination to the authorized officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

11. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder or any person working on the holders behalf, on public or federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made the authorized officer to determine the appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of the evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

12. Construction holes left open over night shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.

13. Within 30 days of completion, the holder will submit to the authorized officer, as-built drawings and a certification of construction verifying that the facility has been constructed (and tested) in accordance with the design, plans, specifications, and applicable laws and regulations.

14. During construction, the holder shall apply water for the purpose of dust control.

15. The holder shall trim trees in preference to cutting trees and shall cut trees in preference to bulldozing them as directed by the authorized officer.

16. Holder shall remove only the minimum amount of vegetation necessary for the construction of structures and facilities. Topsoil will be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation.

17. The holder shall maintain the right-of-way in a safe usable condition, as directed by the authorized officer.

18. The holder will be responsible for the total reclamation of the right-of way shall it ever be

relinquished or terminated. This reclamation will include the scarification of the road surface and the reseeding of the entire disturbed area with a native seed mixture that will be approved by the Authorized Officer prior to the reclamation work.

19. The holder of this right-of-way grant or the holder's successor in interest shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

20. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

21. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

22. The holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

23. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

24. Prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a pre-termination conference. This conference will be held to review the termination provisions of the grant.

25. Archeological sites that are eligible or potentially eligible for the National Register shall be spanned and avoided during construction and maintenance activities. If an eligible site cannot be spanned, impact avoidance and mitigation measures developed in consultation with the State Historic Preservation Office and other interested parties shall be implemented during post-Environmental Assessment phases of project implementation.

26. Prior to construction, a training program shall be instituted that would stress the importance of avoiding unintentional and intentional damage to cultural, paleontological, and ecological resources.

GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department
Revised January 17, 1997

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

Desert tortoises of the Sonoran population are those occurring south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position at all times and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 105 degrees Fahrenheit unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to two miles, but no further than necessary from its original location. If a release site, or alternate burrow, is unavailable within this distance, and ambient air temperature exceeds 105 degrees Fahrenheit, the Department should be contacted to place the tortoise into a Department-regulated desert tortoise adoption program. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, will also be placed in desert tortoise adoption programs. *Mangers of projects likely to affect desert tortoises should obtain a scientific collecting permit from the Department to facilitate temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

- These guidelines do not apply to the Mohave population of desert tortoises (north and west of the Colorado River). Mohave desert tortoises are specifically protected under the Endangered Species Act, as administered by the U.S. Fish and Wildlife Service.

- These guidelines are subject to revision at the discretion of the Department. We recommend that the Department be contacted during the planning stages of any project that may affect desert tortoises.

- Take, possession, or harassment of wild desert tortoises is prohibited by state law. Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.

RAC:NLO:rc

HASSAYAMPA TO JOJOBA
500kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ASSESSMENT

Prepared by

U.S. Department of Interior
Bureau of Land Management
Phoenix Field Office

BLM Case File No. AZA 31468
BLM EA No. AZ-020-2002-0114

February 2003

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LIST OF ACRONYMS

ADA	Arizona Department of Agriculture
ADWR	Arizona Department of Water Resources
AGFD	Arizona Game and Fish Department
APS	Arizona Public Service Company
ASLD	Arizona State Land Department
BLM	Bureau of Land Management
CATS	Central Arizona Transmission System
CEC	Certificate of Environmental Compatibility
DOE	Department of Energy
EA	environmental assessment
EPG	Environmental Planning Group
GBPP	Gila Bend Power Partners
KOP	key observation point
kV	kilovolt
NEPA	National Environmental Policy Act
NOI	Notice of Intent
PNM	Public Service Company of New Mexico
PVNGS	Palo Verde Nuclear Generation Station
RMP	Resource Management Plan
SHPO	State Historic Preservation Office
SQRU	Scenic Quality Rating Unit
SRP	Salt River Project
USDI	U.S. Department of Interior
USFWS	U.S. Fish and Wildlife Service
VRM	visual resource management

CHAPTER 1 – INTRODUCTION

1.1 BACKGROUND

Gila Bend Power Partners (GBPP) has applied for a right-of-way grant AZA-31468 from the Bureau of Land Management (BLM) for the construction and operation of the proposed Hassayampa to Jojoba 500 kilovolt (kV) transmission line project. The proposed route parallels a portion of the existing Palo Verde Nuclear Generating Station (PVNGS) to Kyrene 500kV transmission line project AZA-10350. This line is located within the designated 1-mile-wide BLM utility corridor No. 4 as identified in the *Lower Gila South Resource Management Plan* (RMP) (BLM 1988). The transmission line would extend from the Hassayampa Switchyard (south of the PVNGS) to the proposed Jojoba Switchyard generally located at a point where the Liberty to Gila Bend 230kV line crosses the PVNGS-Kyrene 500kV transmission line (Figure 1-1, located at the end of this chapter). The required right-of-way width would be 200 feet. The estimated length of the proposed transmission line route is approximately 20 miles and crosses approximately 6.8 miles of BLM lands.

This environmental assessment (EA) was prepared for the Phoenix Field Office with the assistance of GBPP and Environmental Planning Group (EPG).

1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

GBPP is requesting right-of-way for a 500kV transmission line within the existing utility corridor from the Hassayampa Switchyard near the PVNGS to the Jojoba Switchyard (under construction). The proposed 500kV line is needed by the fourth quarter of 2004 for transmitting electrical generation from the planned GBPP generation facility in west Gila Bend to the Hassayampa Switchyard. The other portions of the connection between the planned power plant and Hassayampa Switchyard include the Jojoba Switchyard to the Watermelon Switchyard through the two APS Gila River 500kV transmission lines AZA-31222 and the planned Watermelon Switchyard to the planned GBPP generation facility switchyard with a planned 500kV transmission line.

The proposed project would be consistent with the ongoing Central Arizona Transmission System studies (CATS) given that the base case assumption for the studies is for two additional 500kV lines in this corridor to meet future transmission system capacity requirements. The CATS study is a regional transmission collaborative effort with the purpose of developing a high-level transmission plan for Central Arizona. The objective of the CATS Study is to maximize regional benefits and make more efficient use of the existing transmission system.

1.3 CONFORMANCE WITH RESOURCE MANAGEMENT PLANS

The BLM (Phoenix Field Office) is the lead federal agency for this EA. The proposed transmission project is consistent with the management direction and multiple use management framework described in the *Lower Gila South Resource Management Plan* (RMP) (BLM 1988).

Future changes will be permitted on a case-by-case analysis and in accordance with applicable laws, regulations, and policies (RMP, page 9). The proposed project complies with standards and guidelines specified in the RMP, including placement of new electrical transmission lines within designated utility corridors. The proposed project would be located in BLM corridor No. 4 as defined on page 4 of the RMP.

1.4 RELATIONSHIP TO STATUTES, REGULATIONS, AND OTHER PLANS

This EA documents the affected environment and the potential environmental consequences of the proposed action. The EA has been prepared in compliance with the National Environmental Policy Act (NEPA), Council on Environmental Quality Implementation Procedures outlined in 40 CFR Parts 1500-1508, BLM Arizona Environmental Handbook (BLM 1991), and BLM Manual 1790 and NEPA Handbook 1790-1 (U.S. Department of Interior (USDI) 1988). The Maricopa County Comprehensive Plan (October 1997) was also reviewed during the evaluation of this project.

Additionally, environmental planning, consultation, and impact assessment processes have been conducted to comply with applicable policies and programs of federal, state, and local agencies.

1.5 ENVIRONMENTAL REVIEW PROCESS

This EA evaluates the potential environmental impacts of the proposed action and alternatives on the following environmental study areas:

- land use
- visual resources
- cultural resources and Native American concerns
- biological resources
- socioeconomics
- earth and water resources
- air quality and noise

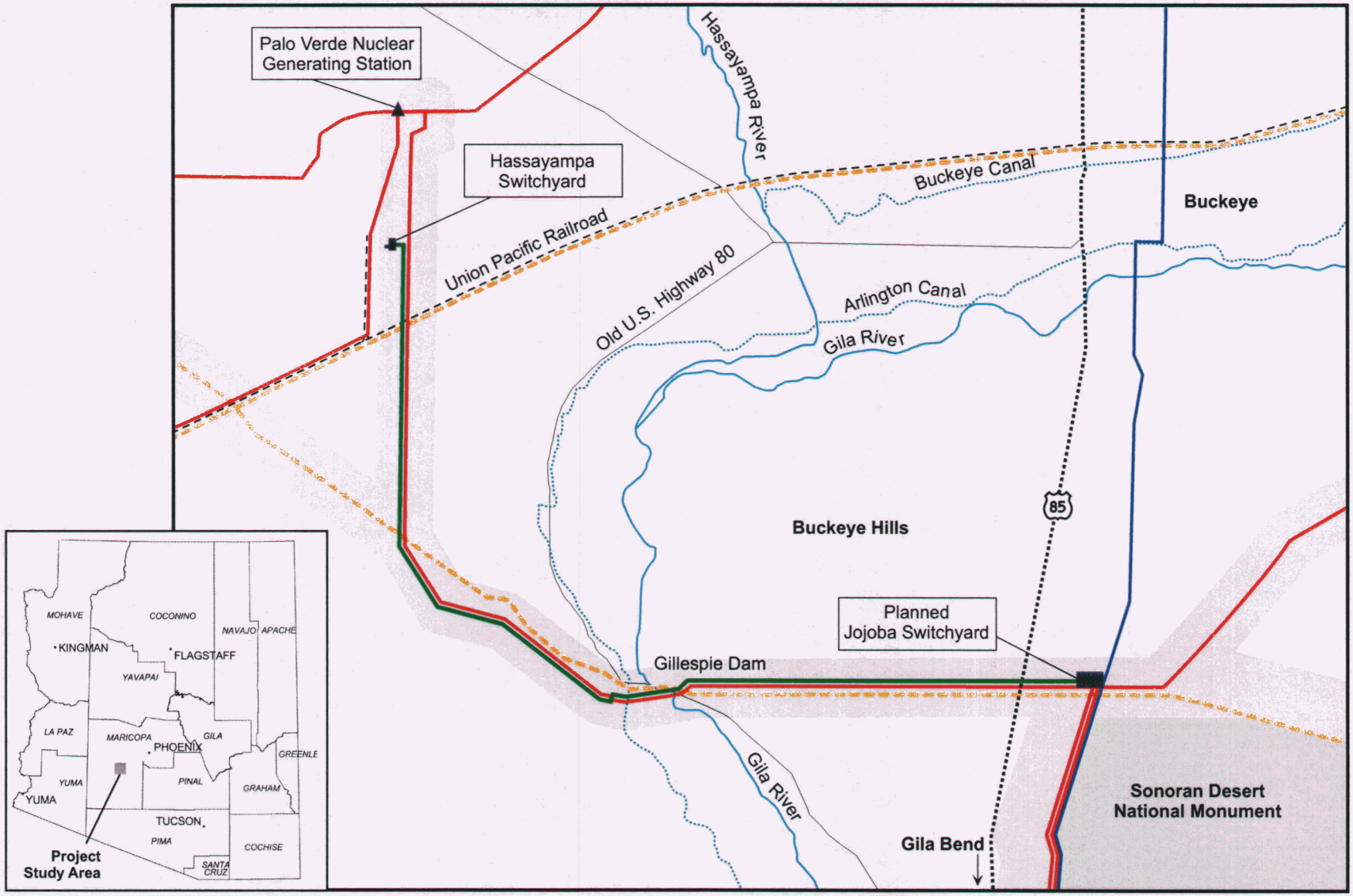
The following critical elements of the environment were considered:

- Areas of Critical Environmental Concern (Section 3.1)
- National Monument (Section 3.1)
- Environmental Justice (Section 3.5)

- Floodplains (Section 3.6)
- Native American Religious Concerns (Section 3.3)
- Threatened or Endangered Species (Section 3.4)
- Prime Farmlands (Section 3.1)
- Wastes, Hazardous or Solid (Section 3.6)
- Wetlands/Riparian Zones (Section 3.4)
- Wild and Scenic Rivers (Section 3.1)
- Wilderness Areas (Section 3.1)
- Invasive Species (Section 3.4)
- Standards for Rangeland Health (Section 3.4)

In addition, this action will not have a direct or indirect adverse impact on energy development, production supply, and/or distribution.

The Arizona BLM has established an informal process for initiating EA level documents, as described in the overview of BLM's NEPA Process (BLM 1998). This process consists of careful planning, internal coordination, and external coordination with other governmental agencies, individuals, and interest groups as appropriate. Publication of a Notice of Intent (NOI) in the *Federal Register* is not required. An informational letter to those on the BLM Phoenix Field Office mailing list was sent early in the project. In addition, the GBPP website provided project information including a telephone information line number for people to contact project team members.



PROJECT LOCATION
Proposed Hassayampa to Jojoba 500kV Transmission Line Project
Gila Bend Power Partners, LLC
Figure 1-1

December 2002

CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

GBPP is requesting a right-of-way for a 500kV transmission line within the existing utility corridor from the Hassayampa Switchyard near the PVNGS to the Jojoba Switchyard. This proposed line is the last portion of the electrical link for transmitting electrical generation from the planned GBPP generation facility in west Gila Bend to the Hassayampa Switchyard. The other portions include the two APS Gila River 500kV transmission lines, which connect the Jojoba Switchyard to the Watermelon Switchyard and a planned 500kV transmission line connecting the planned Watermelon Switchyard to the GBPP generation facility switchyard. Construction of the project would provide an interconnection to deliver power from the planned GBPP power plant to the existing transmission grid at the Hassayampa Switchyard. This single-circuit 500kV line is needed by the fourth quarter of 2004. The proposed line would be located in a BLM designated utility corridor; therefore, no alternative routes outside of this corridor were evaluated in detail. A proposed transmission route and ownership map is provided in Figure 2-3 (located at the end of this chapter). The route is approximately 20 miles and crosses 6.8 miles of BLM lands. The right-of-way width would be 200 feet and adequate for all proposed construction activities.

The proposed 500kV transmission line would originate at the Hassayampa Switchyard, located approximately 1 mile south of the Palo Verde Nuclear Generation Station ("PVNGS"), and end at the planned Jojoba Switchyard (currently under construction) as shown on Figure 1-1. The proposed approximate 20-mile 500kV transmission line would parallel the existing PVNGS-Kyrene 500kV line to the Jojoba Switchyard. The proposed route would be located on the west and south side of the existing line until just before it reaches the Gila River (and nearby Enterprise Canal). Just west of the river, the proposed line would cross to the north side of the existing line and continue into the Jojoba Switchyard. In addition, GBPP would add the required components to the Jojoba Switchyard facility for interconnection. Hassayampa Switchyard already has the appropriate components installed for interconnection.

At the point where the route moves to the north, the circuits of the proposed route and PVNGS-Kyrene lines would shift. The PVNGS-Kyrene 500kV line would shift to the new structures from the river to the Jojoba Switchyard, and the GBPP line would shift to the existing structures. This would result in the GBPP line ultimately being located west and south of the PVNGS-Kyrene 500kV line for its entire distance. This switch allows for easier interconnections at each switchyard.

The 500kV transmission line would be designed for one three-phase circuit (three bundles of three conductors) and two stranded steel shield conductors one of which would be fiber optic line. A multi-pair fiber optic network will be woven into one of the two required stranded steel shield conductors, which run above and parallel to the power conductors. The purpose of the fiber optic network is to provide one of two redundant communication and data paths between switchyards, generating stations, and the system control center. The fiber optics network, woven

into the transmission stranded shield conductor, will be part of the 500kV transmission line operation and control system. The fiber optics network will not be used as part of any commercial data or other communication systems. The structures proposed are steel lattice towers, as shown in Figure 2-4 (located at the end of this chapter). The structures would be approximately 100 to 155 feet above ground, depending on the span length required. The span length between structures would vary between 1,000 and 2,500 feet, according to terrain conditions and to achieve site-specific mitigation objectives such as matching structure locations with the existing PVNGS-Kyrene 500kV line. The lattice towers and conductors would have a low-reflective (non-specular), dulled finish to mitigate visual impacts. Structure selection and individual structure placement to minimize impacts would be determined in the detailed design phase of the project. Structures will be constructed to conform to the Suggested Practices for Raptor Protection on Power Lines (Raptor Research Foundation, June 1981). In addition, structures will comply with Federal Aviation Administration guidelines to minimize aircraft hazards (Federal Aviation 77 regulation).

GBPP proposes to complete right-of-way acquisition, design, construction, and rehabilitation/mitigation pursuant to the installation of the transmission line.

2.2 SUMMARY OF CONSTRUCTION ACTIVITIES

Construction of the proposed line would take place over a nine-month period beginning in the first quarter of 2004. The 500kV line would be in service in the fourth quarter of 2004. Provided below is a summary of key standard construction procedures.

Transmission line construction would require the movement of large equipment and vehicles along the right-of-way. Existing access within the PVNGS-Kyrene 500kV line or El Paso pipeline rights-of-way would be used to provide access to the proposed line. Spur roads will be built from the existing rights-of-way to the new structure locations. Overland access would be used for new spur roads. These spur roads will be surveyed for cultural resource content prior to construction.

The limits of construction activities would be predetermined, with activity restricted to and confined within those limits. No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate survey or construction activity limits. The right-of-way boundary would be flagged in environmentally sensitive areas to alert construction personnel that those areas should be avoided. In addition, all federal and state laws regarding antiquities and plants and wildlife, including collection and removal, would be adhered to.

At each structure site, areas would be needed to facilitate the safe operation of equipment, such as construction cranes or line trucks. At each site, a work area of approximately 100 by 130 feet would be required for the laydown of structures, assembly, and the necessary maneuvers. These work areas would be within the 200-foot right-of-way. The vegetation in the work area would be trampled, not cleared, unless approved by the BLM.

Where ground disturbance occurs or where recontouring is required, surface restoration would be completed. Native plants salvaged from site clearing would be used for revegetation, if appropriate. Selective clearing would be performed only when necessary to provide for electrical clearance, line reliability, and construction and maintenance operations. In construction areas where recontouring is not required, vegetation would be left in place wherever possible to avoid excessive root damage and allow for resprouting.

Excavations for tower foundations are made with power equipment. Where the soil permits, a vehicle mounted power auger or backhoe is used. In rocky areas the foundation holes may be excavated by drilling and blasting, or special rock anchors may be installed. Blasting requires drilling holes in the area to be excavated. After the hole is augured, forms will be set, reinforcing steel and bolts placed, and concrete poured. The remaining spoils material would be spread on the ground.

Tower parts and associated hardware are shipped to each structure site by truck. Structure assembly and mounting of associated line hardware takes place at each site. The assembled structure is then raised and attached to each set of foundations. Lattice towers will be dulled galvanized steel.

After the structures are erected, insulators, hardware, and stringing sheaves are delivered to each structure site. The structures are then rigged with insulator strings and stringing sheaves at each ground wire and conductor position. The ground wire and conductor are strung using powered pulling equipment at one end and powered braking or tension equipment at the other end. Pulling lines for the ground wire and conductor would be installed with the use of a helicopter, bulldozer, or all-terrain vehicle. An outage on the PVNGS-Kyrene 500kV line will be necessary in order to shift the conductors at the point of the line west of the Gila River where the GBPP structures cross to the north side of the PVNGS-Kyrene structures. The outage on the PVNGS-Kyrene 500kV line will be scheduled to be part of the annual transmission line maintenance outage. There will not be any disruption in service to power customers. Power will be routed over alternate transmission routes during the PVNGS-Kyrene transmission line outage. Non-specular (low-reflective) conductors would be used to minimize visibility of the transmission line.

Construction sites and access roads would be kept in an orderly condition throughout the construction period. Refuse and debris, including stakes and flags, would be removed from the sites and disposed of in an approved manner. No construction equipment oil or fuel would be drained on the ground. Oils or chemicals would be hauled to an approved site for disposal. No open burning of construction debris would occur on BLM-administered lands. If during the construction activities, fences or gates are damaged or destroyed, they would be repaired or replaced.

2.3 ALTERNATIVES

2.3.1 No-Action Alternative

Under the no-action alternative, the right-of-way application would not be approved and the transmission line would not be built. This alternative would not meet the project need.

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED

2.4.1 Alternative Structures

Two types of structures were considered for the Hassayampa to Jojoba Transmission Project: single-circuit lattice tower and single-circuit steel pole. The structure comparison was done according to criteria that included industry design practices, reliability, maintenance, material availability, costs, right-of-way, typical height, maximum span, footprint requirements, and aesthetic characteristics. Wood poles were not considered because they cannot be manufactured large enough to meet 500kV requirements. The steel pole structure was eliminated from further consideration because the proposed lattice tower would better match existing structure types and spans of the PVNGS-Kyrene 500kV line, thereby reducing visual impacts.

2.4.2 Alternative Routes

Three alternative routes were initially considered but eliminated from further consideration.

An alternative that went west from the Gila Bend Power Plant site south of the Woolsey Peak and Signal Mountain Wilderness Areas to the Painted Rock Dam Road was considered (Figure 2-1). This alternative paralleled the Painted Rock Dam Road north to Poco Dinero Road, continued along Poco Dinero Road to the Union Pacific Railroad tracks, then paralleled the southeast side of the railroad tracks northeast to the Hassayampa Switchyard. This alternative would not use the BLM designated utility corridor (No. 4) and would result in greater environmental impacts, and therefore, was not carried forward.

A second alternative left the Gila Bend Power Plant site to the north and generally parallels Citrus Valley Road, eventually turning east around the east side of the Woolsey Peak Wilderness Area and then parallels Enterprise Road north to meet the PVNGS-Kyrene 500kV line west of the Gillespie Dam (Figure 2-2). The line then parallels the west side of the Kyrene transmission line north to the Hassayampa Switchyard. This alternative was eliminated from further consideration because of similar difficulties in crossing the Gila River above the Painted Rock Dam. In addition, this alternative would not use the BLM designated utility corridor (No. 4) and would result in greater environmental impacts.

A third alternative considered was to construct a line west from the Gila Bend Power Plant site south of the Woolsey Peak and Signal Mountain Wilderness Areas to the Painted Rock Dam

Road, similar to the first alternative discussed. However, this line continues west and intersects the proposed Southwest Power Link 500kV transmission line at a location near Agua Caliente, Arizona. The Southwest Power Link was planned to interconnect transmission between the PVNGS Switchyard and a location in West Yuma. This alternative was eliminated because the Southwest Power Link 500kV line's proponents terminated the project.

Finally, all three alternatives are inconsistent with the BLM's RMP, would be greater in length than the proposed action, and would not utilize the recently completed two APS Gila River 500kV lines; therefore, greater environmental and financial impacts would be anticipated.

2.4.3 Alternative Voltage

An alternative voltage of 345kV was initially considered. GBPP will be connecting to a 500kV system at the plant and the Jojoba Switchyard. The 345kV voltage, though it may be sufficient to meet GBPP's needs, would require additional equipment at both switchyards for the voltage change. In addition, the 345kV structures would be less like the existing PVNGS-Kyrene 500kV line structure types making the matching of structure type and existing spans more difficult and increasing visual impacts. In addition, the ongoing CATS study has identified a need for a total of three 500kV transmission lines (including the existing PVNGS-Kyrene 500kV line) between the Hassayampa and Jojoba switchyards. Therefore, this alternative was eliminated.

2.4.4 Local Alignment Alternatives

Three local alignment routing alternatives were initially considered but eliminated from further consideration. One alternative is a minor variation to the proposed action that would place the line on the west and south sides of the planned PVNGS-Saguaro line. This alternative would require the construction of the PVNGS-Saguaro line to occur between the PVNGS-Kyrene and GBPP lines. Construction between two 500kV transmission lines, though technically feasible, is highly undesirable due to increased safety risks for construction personnel and the possibility of a power outage in the system should one of the operating lines be impacted. In addition, there are El Paso Natural Gas pipelines parallel and south of the PVNGS-Saguaro corridor from the Gila River to the Jojoba Switchyard leaving insufficient room (based on current siting practices) for an additional transmission line.

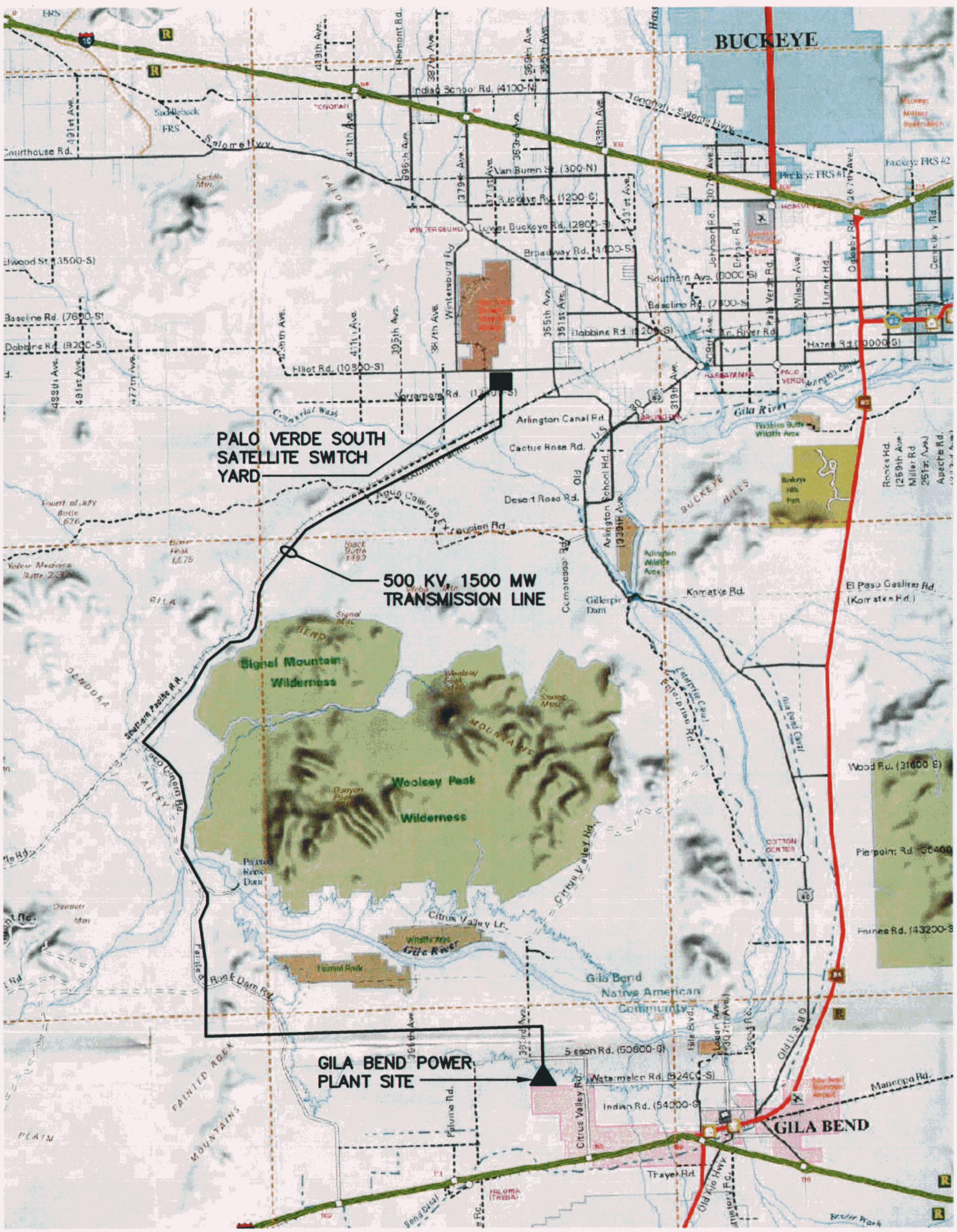
Another local alignment routing alternative was to build within the planned PVNGS-Saguaro corridor on the west and south side of the PVNGS-Kyrene 500kV line from the Hassayampa to Jojoba switchyards. This alternative would require the future PVNGS-Saguaro line to be built south of the GBPP transmission line because engineering constraints at the Jojoba Substation would not allow the PVNGS-Saguaro line to be built north of the PVNGS-Kyrene 500kV line. There is not sufficient room (based on current siting practices) to build the PVNGS-Saguaro line from the Gila River to the Jojoba Switchyard between the GBPP line and El Paso Natural Gas Pipelines because of the close proximity to the El Paso Natural Gas Pipelines. This alignment

would then be placed farther south of the existing El Paso Natural Gas Pipelines resulting in greater visual impacts. Therefore, this alternative was not carried forward for further evaluation.

The third alternative initially considered paralleled the existing PVNGS-Kyrene 500kV line on the east and north side from the Hassayampa Switchyard to the Jojoba Switchyard. This alternative was eliminated from further consideration because of engineering difficulties with the connection of the GBPP transmission line into the Hassayampa Switchyard from the east side of the PVNGS-Kyrene 500kV line. In addition, this alternative would be located closer to the Gillespie Dam Bridge and the Arlington Wildlife Refuge likely resulting in greater impacts.

2.4.5 Alternative Transmission Technologies

Underground installations are utilized under certain circumstances for short distances where an overhead line is not feasible (e.g., in the vicinity of airports or urban centers). However, underground high voltage transmission lines require extremely expensive cooling systems to dissipate the heat generated by transmission of electricity along the lines. They also result in extensive ground disturbances and require other special design requirements and large cooling facilities at either end of the proposed transmission line. In summary, the cost of such facilities are upward of 10 times the cost of overhead facilities, and this alternative was determined to be cost prohibitive. In this project area, a designated utility corridor exists which allows for the placement of overhead lines. Therefore, underground construction was eliminated from further consideration.



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No.	Revisions	Date

GILA BEND POWER PROJECT

TRANSMISSION LINE ALTERNATIVE ROUTE ELIMINATED

20021218.131424

DESIGN | DRAWN | ENG.

Job Number: 147100 | Date: 1/31/00

Sheet Number

Figure 2-1

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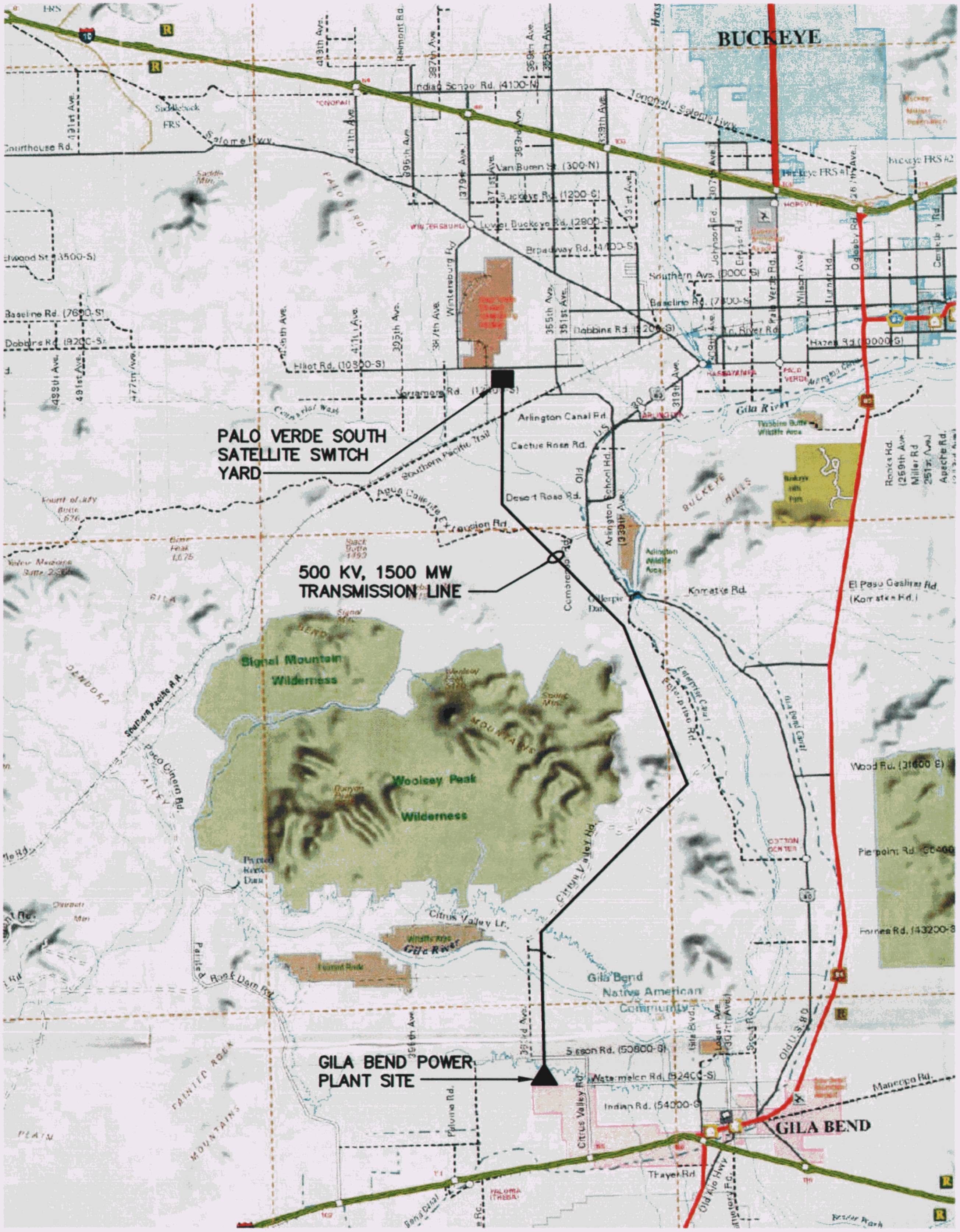

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Consultants

No.	Revisions	Date

GILA BEND
POWER PROJECT

TRANSMISSION LINE
ALTERNATIVE ROUTE
ELIMINATED

20021218.131450

DESIGN	DRAWN	ENG.

Job Number: 147100
Date: 1/31/00
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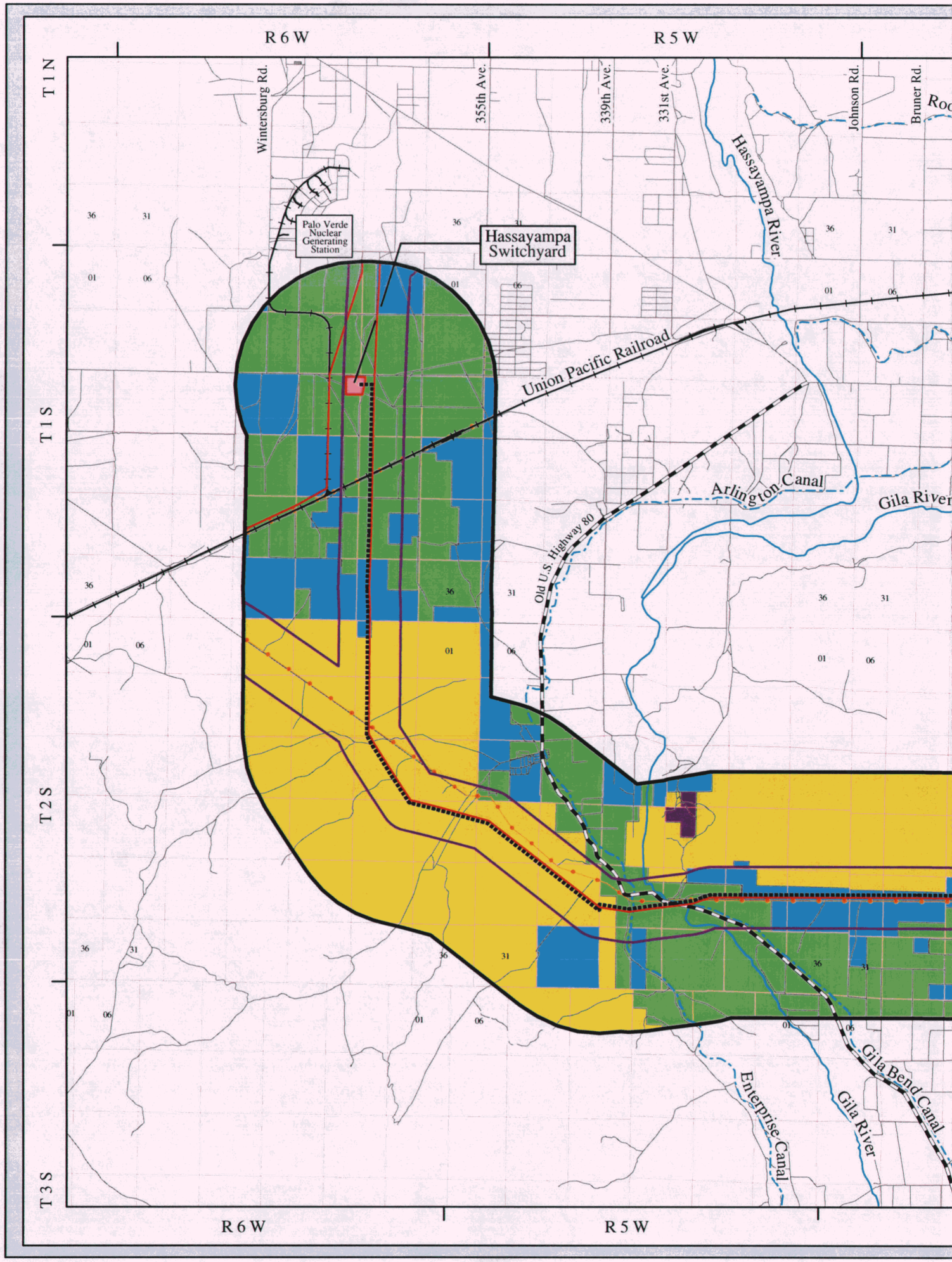
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Wintersburg Rd.
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331st Ave.
Johnson Rd.
Bruner Rd.
Hassayampa River
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Union Pacific Railroad
Arlington Canal
Old U.S. Highway 80
Gila River
Gila Bend Canal
Enterprise Canal
Gila River

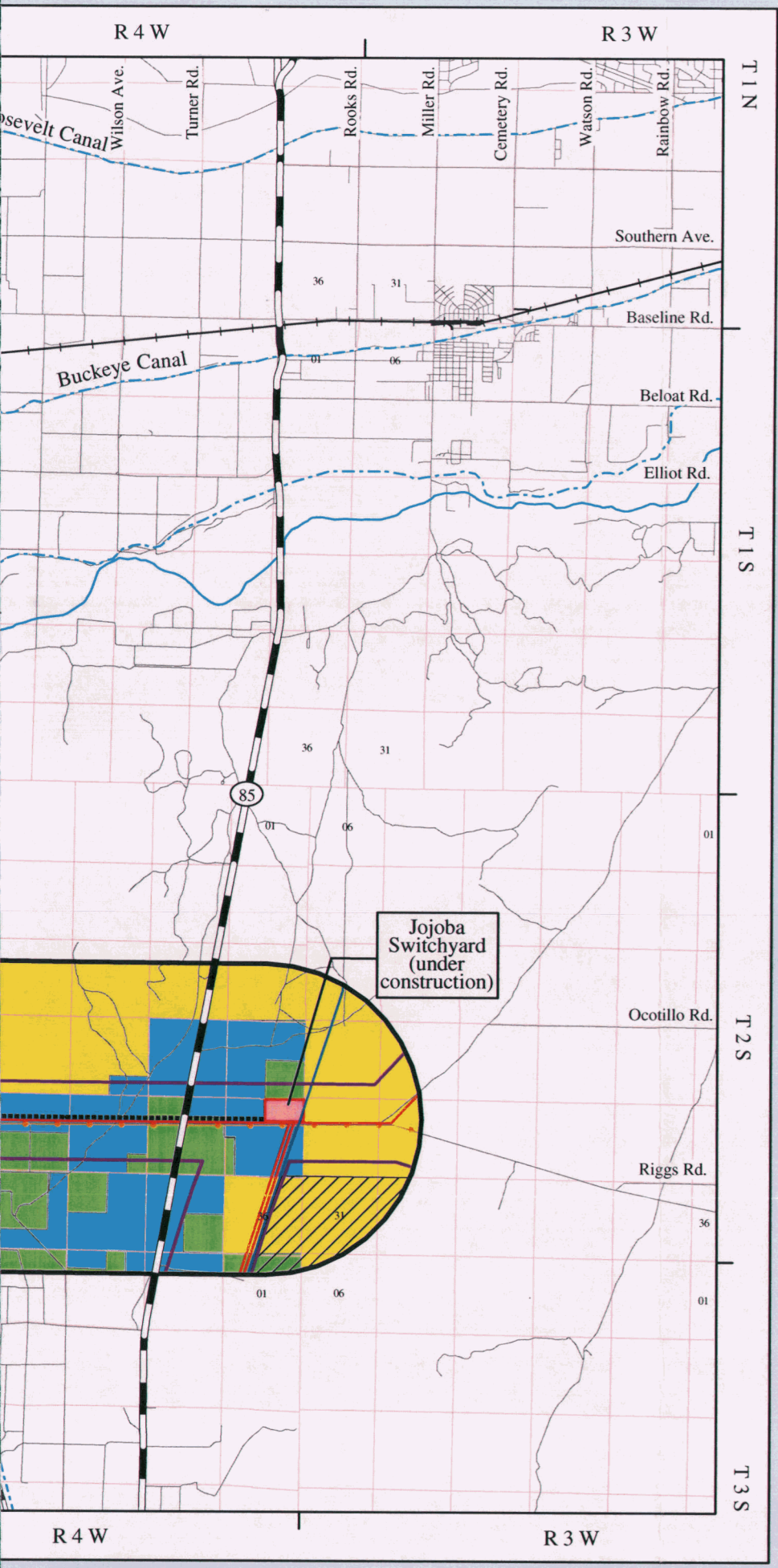

Figure 2-3

Proposed Route and Land Ownership

Hassayampa to Jojoba
500kV Transmission Line Project

Gila Bend Power Partners, L.L.C.

- Bureau of Land Management
- State Trust
- Private
- Arizona Game and Fish

General Reference Features

- Proposed Transmission Line Route
- Switchyard
- Study Area Boundary
- BLM Designated Utility Corridor
- Sonoran Desert National Monument
- 500kV Transmission Line
- 230kV Transmission Line
- Gas/Oil Pipeline Corridor
- State Route
- Old U.S. Highway 80
- Road
- Railroad
- Canal
- River
- Section Line

Sources:

Space Imaging. August, 1999. USGS Landsat Imagery.
May 2002. Arizona State Land Department. 2000. Modified.

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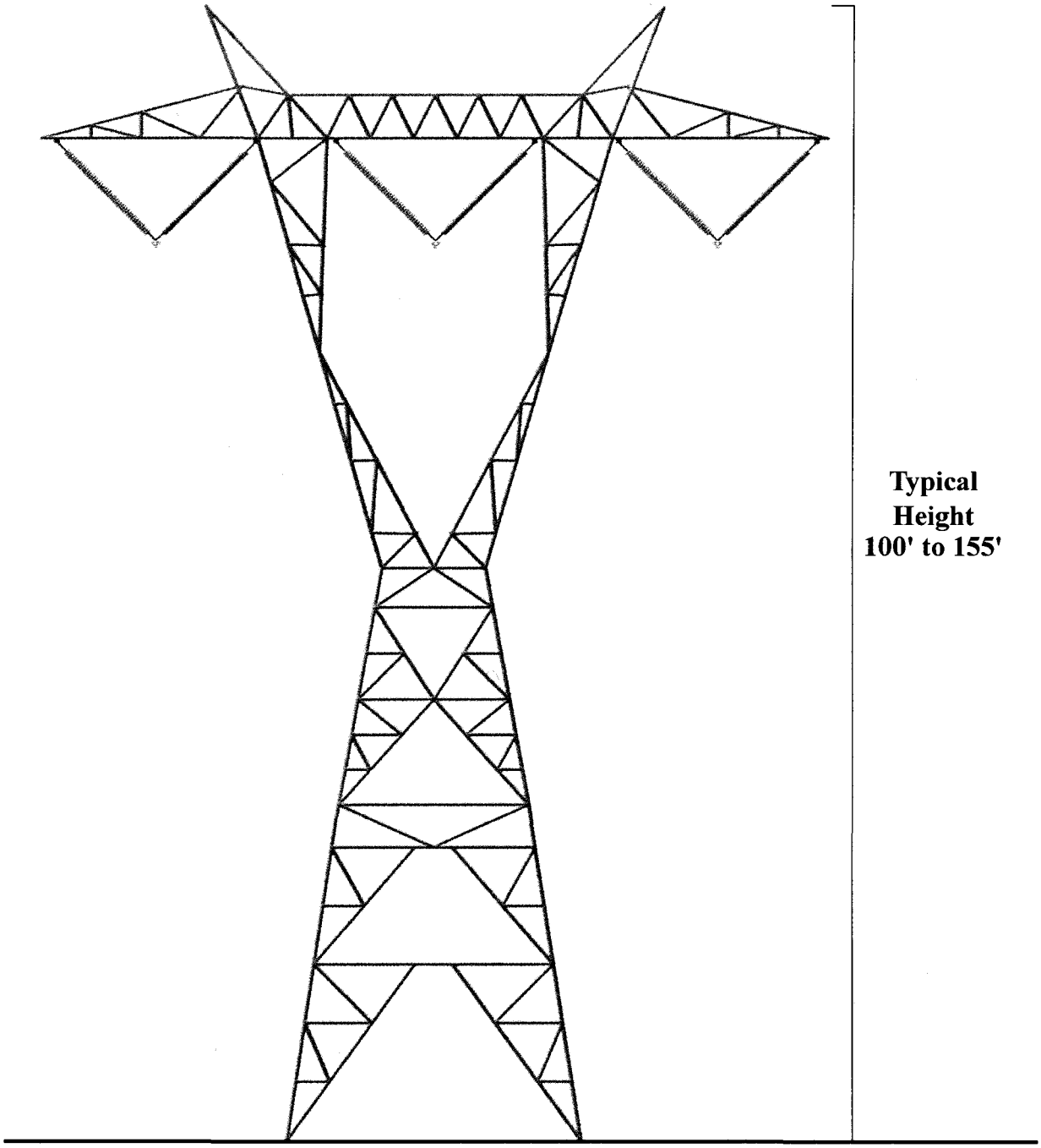
1 0.5 0 1 2 3 Miles

epg
environmental planning group

m:/projects/gbpp/hass-jojoba/mxds/fig2_3.mxd September 12, 2002

Typical 500kV Single-Circuit
Steel Lattice Structure



Hassayampa to Jojoba
500kV Transmission Line Project

Figure 2-4

CHAPTER 3
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The affected environment and potential environmental consequences are addressed in this chapter. This analysis includes the natural, human, and cultural environment that would be potentially affected by the construction, operation, maintenance, and long-term presence of the Hassayampa to Jojoba 500kV transmission line project. The affected environment for the proposed route is often referred to as the "study area."

The study area includes a 4-mile-wide corridor (2 miles on each side of the reference centerline for the proposed 500kV line) for land use and visual considerations and a narrower corridor for cultural and biological considerations. The terrain is relatively flat, with hills occurring in the southwest portion of the study area west of the Gillespie Dam and at the Buckeye Hills located north of the proposed route, west of State Route 85. The land is primarily undeveloped in the study area with the exception of limited agricultural, residential, and commercial uses, a BLM designated utility corridor, four existing pipelines, and one 500kV transmission line (PVNGS-Kyrene 500kV line).

The following sections explain in detail the existing conditions found throughout the study area and the potential impacts of the proposed project. Impacts that could result from the project were determined by comparing the proposed project to the existing environment. The impacts are described as either direct, indirect, or cumulative. The direct and indirect impacts are discussed in the individual resource sections. The cumulative impacts are discussed in Chapter 4. The impact analysis is based on the inventory results and standard practices combined with professional judgment of the principal investigator for each environmental component.

Standard operating procedures and mitigation measures were applied to reduce potential impacts to the project. Mitigation measures are discussed within each resource section and can be reviewed in Appendix A.

3.1 LAND USE

3.1.1 Affected Environment

The proposed route crosses two jurisdictions—Maricopa County and the town of Buckeye. The majority of the study area is in the jurisdiction of Maricopa County; however, a small portion near State Route 85 is located in the town of Buckeye. The land ownership within the study area includes federal (BLM), state, Arizona Department of Game and Fish, and private entities (Figure 2-3). Table 3-1 lists land ownership along the proposed alternative. Figure 3-1, located at the end of this chapter, illustrates existing land uses in the project area.

The proposed transmission line route crosses mostly vacant BLM and state-owned land, which is used for grazing. The land is characterized by a lack of development and typical lower Sonoran Desert vegetation. The Sonoran Desert National Monument was designated in January 2001 by President Bill Clinton and is located approximately ¾ mile south of the proposed route at the far western end of the study area. The Arizona Department of Game and Fish manages the Arlington Wildlife Preserve, a preserve located north of the Gillespie Dam. There are no areas of Critical Environmental Concern designated in the study area.

TABLE 3-1
LAND OWNERSHIP CROSSED BY PROPOSED PROJECT

Ownership	Miles (approximate)
BLM	6.8
State trust	7.1
Private	6.1
Route total	**20.0**

Industrial uses in the study area consist primarily of utility operations including the PVNGS, Redhawk Power Generation Facility, Mesquite Power Generation Facility, Hassayampa Switchyard (northern termination point of the proposed alternative), El Paso Natural Gas Gila Pump Station, Jojoba Switchyard (southern termination point of the proposed alternative), 500kV (two APS Gila River transmission lines) and 230kV (Liberty to Gila Bend 230kV line) transmission lines, and natural gas pipeline corridors. In addition, the Southwest Regional Landfill is located south of the proposed alternative and east of State Route 85. Long-term plans exist to expand the landfill south and east in approximately 15 years (Dugas 2002). South of the landfill is the Arizona State Prison Complex–Lewis. The prison is located adjacent to State Route 85 on both the east and west side, about ½ mile south of the proposed alternative.

Irrigated farmlands occur in three areas including the northern portion of the study area west of the proposed alternative, in the vicinity of the Gila River and Arlington Canal, and south of the proposed alternative on the west side of the Gila River and east from the Gila River to State Route 85. The Desierto Verde plant nursery is located to the west of State Route 85 and would be crossed by the proposed route.

Residential land use includes low-density residential areas and single-family dwelling units. A low-density residential area is defined as 0 to 2 dwelling units per acre and is located northeast of the Hassayampa Switchyard along Elliot Road approximately 1.8 miles from the proposed alternative. Single-family dwelling units are found along Old U.S. Highway 80 north of the Gillespie Dam (approximately 1 mile from proposed route) and west of State Route 85. The closest residential units (two) lie west of State Route 85, about ¼ mile south of the proposed route.

The abandoned facilities in the study area include housing built for El Paso Natural Gas employees that worked at the Gila pump station and an abandoned feedlot and housing built by the Arlington Cattle Company (Maricopa County 2000).

Two major arterials are located in the study area: Old U.S. Highway 80 and State Route 85. Both of these arterials lie in a general north-south direction. Old U.S. Highway 80 is designated as a scenic road by the Maricopa County Department of Transportation (Maricopa County 1997). The Arizona Department of Transportation plans to widen State Route 85 to accommodate four lanes from I-10 to the town of Gila Bend. Initial plans for the portion of State Route 85 that occurs in the study area are to expand to the west of the existing road centerline approximately 250 feet to the edge of the new road right-of-way (Dimitroplos 2002). The Union Pacific Railroad crosses the northwestern portion of the study area south of the Redhawk Generating Facility. Two airstrips exist in the study area. The first is located next to the El Paso Natural Gas Company Gila pump station approximately 0.4 mile from the proposed alternative. The airstrip is not maintained and seldom used (Courier 2002). The other airstrip is located in an agricultural area approximately ½ mile south of the proposed transmission line. The proposed route does not cross either airstrip.

Planned land use for the study area is designated by the different managing entities. The portion of the project that crosses BLM lands is located within the Lower Gila South Planning Area. The *Lower Gila South Resource Management Plan* (BLM 1988) is the primary guide for the Lower Gila South Planning Area, part of the BLM Phoenix Field Office. The RMP provides a comprehensive framework for future management actions, uses, allocation of public land, and resources. The Federal Land Policy Management Act mandated that BLM has the responsibility to manage public land under the guiding principle of multiple use. Thus, it is charged with managing public land use to meet the needs of the public, while protecting the environment and public values.

The RMP identifies the PVNGS-Kyrene 500kV transmission line corridor as one of ten "existing utility rights-of-way that should be designated to serve as utility corridors and recommends that each of these corridors be one-mile-wide" (BLM RMP 1988, p. 4). In addition, the RMP states "the impact of designating corridors along existing routes would be somewhat beneficial for wildlife by limiting future disturbance in other areas" (BLM RMP 1988, p. 63). This corridor is referred to as No. 4 in the RMP.

The Arizona State Land Department (ASLD) manages State Trust lands and resources. At the time of this document, no specific future plans for state land within the study area were identified. The initial process of purchasing State Trust land or long-term leasing for a right-of-way is to submit a filing fee and an application for review by the ASLD's Board of Appeals. Following the application review, ASLD determines if the proposed land use is adequate for sale or commercial lease. An auction is scheduled when ASLD determines that the best interest of the trust is to sell or lease the parcel.

The future use of unincorporated private lands is planned under the jurisdiction of Maricopa County. The *Maricopa County Tonopah/Arlington Area Plan* (Maricopa County 1997) provides for rural residential and open space uses on the lands within the northern portion of the project study area. The open space designation denotes areas intended for open space and recreation, and the rural designation allows for up to one dwelling unit per acre in areas where urban services are

limited. The southern and eastern portions of the study area are shown as rural development areas in the *Maricopa County 2020 Comprehensive Plan.* Approximately 1 mile south of the proposed alternative is a planned residential development of about 50 lots and 2 ski lakes called Spring Mountain Ski Ranch. This development has preliminary plat approval from the county but does not have final plat approval (Nola 2002).

The town of Buckeye owns a small portion of land in the eastern portion of the study area, however the town of Buckeye planning area extends from the Gila River east beyond the study area. At this time, no future plans exist for the Town of Buckeye that would interfere with the proposed alternative (Zeller 2002).

In addition to the GBPP proposed transmission line, four other extra high voltage transmission line projects have been proposed for construction in the PVNGS-Kyrene BLM designated utility corridor between the Hassayampa and Jojoba switchyards. A trust made up of a group of utility companies has an existing Certificate of Environmental Compatibility from the Arizona Corporation Commission for a 500kV transmission line adjacent to the PVNGS-Kyrene 500kV line from PVNGS to Saguaro Substation (Case No. 24). Salt River Project (SRP) announced last year a proposed 500kV transmission line from the Hassayampa Switchyard to the southeast valley. Public Service Company of New Mexico (PNM) applied for a BLM right-of-way for two 345kV transmission lines that would connect the Hassayampa Switchyard to Sonora, Mexico through the Jojoba Switchyard. An environmental impact statement is currently being prepared for this PNM project by the Department of Energy (DOE). It appears the 1-mile-wide designated utility corridor will accommodate all of the currently planned transmission lines. Additionally, according to the ongoing CATS studies (inclusive of the existing PVNGS-Kyrene 500kV line), three 500kV transmission lines in this corridor will be sufficient capacity to meet the transmission requirements of these various above-mentioned projects. Further discussion of the planned transmission lines can be found in Chapter 4 under cumulative impacts.

3.1.2 Environmental Consequences

3.1.2.1 Proposed Action

It is anticipated that the proposed transmission line would have no long-term direct or indirect adverse effect on the majority of existing or planned land uses. The majority of the land along the proposed route is currently vacant and no new land uses, planned or proposed, were identified within the transmission corridor. Direct impacts could occur to the Desierto Verde plant nursery towards the eastern end of the study area. If spans were matched, the new lattice structure of the proposed alternative would not be placed within a planting area. Currently, there are no trees planted in the existing PVNGS-Kyrene right-of-way. GBPP is determining whether or not the planting and harvesting of trees within the proposed project's right-of-way under the conductors may pose conflicts. GBPP has met with one of the principals of the nursery and no conflicts were identified. The proposed transmission line would be on the opposite side of the existing PVNGS-Kyrene 500kV line at both airstrip locations, therefore no adverse effects are

expected. Construction and operation of the 500kV transmission line would avoid conflicts with residential land uses.

The proposed alternative would be parallel to the existing PVNGS-Kyrene 500kV line. The alternative would consolidate transmission lines within a single existing corridor in an adjacent right-of-way and would not impact (directly or indirectly) residential land uses. Grazing activities may take place after construction without any substantial loss of grazing capacity. Temporary, short-term disturbances would be mitigated during and after the construction period. Mitigation measures that would minimize the impact on grazing are as follow:

- Restricted vehicle access - All construction vehicle movements outside of the right-of-way will be restricted to designated access, contractor acquired access, or public roads.
- Restoring land - Various methods will be used in the construction area to provide erosion control and revegetation.
- Repairing/replacing fences - If during the construction activities, fences or gates are damaged or destroyed, they will be repaired or replaced.

The proposed alternative would be consistent with BLM's RMP as this route is located within the designated utility corridor No. 4 (BLM RMP 1988). In addition, the proposed project is also consistent with the ongoing CATS studies.

3.1.2.2 No Action

No land use impacts would occur if the no-action alternative is selected. Existing and planned land uses would be unaffected.

3.2 VISUAL RESOURCES

The visual resource study was based upon the BLM's Visual Resource Management (VRM) System and addresses the potential visual effects of the proposed project on landscape scenic quality and sensitive viewers. In addition, the visual study was conducted in compliance with the BLM VRM designations (BLM Manual 8410-1, January 1986). Inventory data for visual resources within the study area were collected from existing and future land use plans (see land use map), aerial photography, previous studies, and field review. The visual resource inventory focused on landscape character, determination of scenic quality, identification of sensitive viewers, and viewing conditions within the study area. Data were collected 2 miles on either side of the centerline of the proposed route in order to characterize the visual resources in the study area.

3.2.1 Affected Environment

The proposed project is located within the Basin and Range Physiographic province in southwest Arizona. The topographic character within the general study area can be described as creosote flatlands surrounded by rolling hills with steep mountains. Agricultural fields, while not crossed by the proposed project, are located throughout the study area with the majority occurring within the Gila River floodplain.

The predominant vegetation character of the study area is representative of the Lower Sonoran Desert including saguaro, ocotillo, paloverde, ironwood, and creosote. Creosote and bursage are dominant plant species in the southeastern portion of the study area where sand-silt soils are abundant. Xeroriparian washes supporting typical vegetation for this physiographic region occur throughout the area as well. There is a stretch of the Gila River that is perennial supporting primarily tamarisk; however, other types of mesoriparian vegetation does occur in small isolated patches.

Infrastructure/cultural modifications that affect the natural landscape setting include a 500kV lattice transmission line and gas pipelines located within the BLM designated utility corridor. These features would be paralleled by the proposed project. Additional modifications include El Paso Natural Gas pipelines and access roads, Union Pacific Railroad, Gillespie Dam and bridge, ASPC-Lewis (prison), and a landfill in the vicinity of State Route 85. Several 12kV distribution lines occur in the northern and southern portions of the study area along roads and agricultural fields. Residential areas occur in the south-central portions of the study area. There are two areas of visual interest, Arlington State Wildlife Area in the northern portion of the study area and a bluff with petroglyphs on the southwestern side of Arlington Valley north of the proposed route. A tree nursery, Desierto Verde, is located in the southeastern portion of the study area.

3.2.1.1 Agency Visual Resource Management Classes

BLM VRM classes are assigned to the various landscapes managed by the BLM and provide criteria for identifying acceptable levels of visual alterations within each class. VRM class designations are typically dictated by the scenic quality of the landscape, levels of sensitivity from key observation points (KOPs) and associated visibility, and agency management objectives (Appendix B, Table B-1).

VRM classes were inventoried within the study area using GIS data acquired from the BLM. The proposed route would only cross lands with a VRM class IV designation. Class II designations were generally associated with the Sonoran National Monument, and class III, generally associated with the land adjacent to State Route 85, do occur in the study areas but would not be crossed by the proposed project. The rest of the BLM administered lands are designated as class IV (associated with highly modified and common landscapes). There were no areas within the study area designated as class I.

3.2.1.2 Scenic Quality

Scenic Quality Rating Units (SQRUs) are used by the BLM to describe specific natural landscape types found within the regional landscape. The designations are categorized into three classes—A (outstanding), B (above average), and C (common). The degree of diversity and variety of visual elements (i.e., landform, vegetation, color, etc.) associated with the previously described landscape character were used to derive the SQRUs along the proposed project. Scenic quality rating forms used for this analysis are contained in Appendix B.

Approximately 14 miles of the proposed 20 miles would cross class C landscapes, which are primarily associated with large expanses of homogenous vegetation (creosote) and little if any topographical features. Class C landscapes tend to lack color, landform, and visual diversity. Class B landscapes that would be crossed (approximately 4 miles) by the proposed project are associated with desert washes which exhibit a greater diversity of vegetation than that of the surrounding landscape. Other areas that were designated class B and not crossed by the proposed project include agricultural lands, desert hills (central portion of the study area), and the Gila River valley north of Gillespie Dam due its topographic and vegetative diversity. The proposed project would not cross any class A landscape types. However, areas of class A landscape do occur within the general study area and are associated with desert mountains and the Arlington Wildlife Refuge. Due to topographical and vegetative diversity and the occurrence of water, these landscapes were considered to have high scenic quality. The remaining 2 miles would cross developed land.

3.2.1.3 Key Observation Points

KOPs, their associated viewers, and corresponding viewshed were identified through previous studies recently completed for the APS/SRP Southwest Valley Transmission Line Project, data gathered during field inventories, and aerial photograph interpretation. The sensitive viewers were organized into three categories including residential, recreation, and transportation views and are described below.

Residential Views

There are a total of 13 existing residential viewers that occur in the vicinity of the proposed project. Specifically, four residences occur within 0-½ mile of the proposed project and would have views of the existing and proposed transmission line. The remaining nine residences would occur within 1 to 2 miles of the proposed project and their associated views would be partially screened due to the topography of the area. The residences occur in the southeast and central portions of the study area respectively.

Recreation Views

The only public recreation site that occurs in the study area within the vicinity of the proposed project is the Arlington Wildlife Refuge used, in part, for bird hunting and bird watching. There are no designated trails in this area and any recreation use would be widely dispersed and seasonal (primarily in the river basin) (Hildebrandt, 2002). The landscape adjacent to the refuge is highly modified based on the presence of Gillespie Dam, a bridge, expanses of salt cedar, and the existing PVNGS-Kyrene 500kV line and El Paso Natural Gas pipelines. The southern boundary of the refuge is located approximately ¾ mile north of the proposed project. Due to these conditions, there would be only intermittent and modified views of the proposed project.

Transportation Views

There are two main transportation routes that occur within the study area that would have views of the proposed project: Old U.S. Highway 80 and State Route 85. Old U.S. Highway 80 is a county designated scenic route that is crossed by the proposed project. Views from this road were considered because of its scenic route designation although many modifications to the landscape are present in this area. The other transportation route, State Route 85, would be crossed by the proposed project on the eastern side of the study area in a highly modified setting with a landfill, 500kV transmission line, and a prison adjacent to the highway.

3.2.2 Environmental Consequences

The visual resources impact assessment evaluated the level of potential change the proposed transmission line and associated switchyard interconnection would have on scenic quality and resulting effects to sensitive viewers. The components of the visual assessment based on the BLM's visual management system included a visual contrast analysis, identification of impacts, preparing visual simulations to depict what the proposed action may look like within the existing landscape setting (Appendix B, Figures B-1 through B-3), and identification of the resulting levels of visual impact. The visual impact assessment considered the effects of new structures introduced into the landscape, access and vegetation clearing, and the influence of existing modifications (i.e., existing PVNGS-Kyrene 500kV line).

3.2.2.1 Visual Contrast

Visual contrast is a measure of the anticipated changes that may occur with the construction of the proposed project in specific landscape settings and at varying distances from sensitive viewers. The key factor that contributes to changes in contrast levels affecting scenic quality and sensitive viewers is the introduction of a manmade element in the landscape.

Visual contrast resulting from the proposed project would be weak because: (1) an existing transmission line would be paralleled the entire length, (2) existing access is available on level terrain, (3) other modifications in the landscape are present in the vicinity of the project, and (4) several mitigation measures have been committed to that will further reduce visual contrasts.

3.2.2.2 Key Observation Points

Impacts to sensitive viewers (residences, recreation areas, and travel routes) are also anticipated to be minimal due to the presence of the existing PVNGS-Kyrene 500kV line within their existing viewshed. The use of dulled steel lattice structures similar to the existing PVNGS-Kyrene 500kV line, matching structure type and placement, nonspecular conductors, and using existing access would further reduce impacts to sensitive viewers.

Visual impacts to residential viewers are expected to be minimal. Although the distance of the proposed project is within ½ mile of 4 residences, impacts would be reduced because it would be located on the north side of the existing transmission line opposite of the residences. The remaining residences have limited and modified views to the proposed project; therefore, impacts would be minimal. Minimal impacts were also identified for viewers associated with the planned conceptual Spring Mountain Ski Ranch because the proposed project would occur approximately 1 mile from the viewers and be located on the north side of the existing transmission line resulting in reduced visibility and contrast.

Visual impacts to the Arlington Wildlife Refuge are not anticipated because there are no designated trails located within the refuge and the Gillespie Dam and bridge would modify the views of the proposed project.

Impacts to viewers from the two travel routes, Old U.S. Highway 80 and State Route 85, would be minimal because of the following: (1) the proposed project would parallel the existing PVNGS-Kyrene 500kV line, (2) short view durations, and (3) there is existing landscape modification in the vicinity of the road crossings. In addition, the vast majority of the proposed action would be well out of view from motorists using the two travel routes. Project contrast to Old U.S. Highway 80 would be reduced because the existing landscape is already highly modified by the existing PVNGS-Kyrene 500kV line, a lattice bridge, and Gillespie Dam. Impacts to State Route 85 would be minimal because the proposed action would occur perpendicular to the highway and cross at only one point adjacent to the existing line. The natural landscape setting where the proposed project would cross State Route 85 has been highly modified with the occurrence of the existing PVNGS-Kyrene 500kV line, landfill, prison, and tree nursery, further reducing potential project contrast. See Figures B-1 through B-3 for photo simulations of the proposed action added to the existing visual conditions.

3.2.2.3 Scenic Quality

Minimal impacts to scenic quality of the study area are anticipated. No class A areas would be affected by the project. In areas of class B and C landscapes the proposed project would parallel the existing PVNGS-Kyrene 500kV line that is adjacent to an access road within a designated utility corridor for the majority of its length resulting in minimal contrasts. Furthermore, any impacts to scenic quality resulting from vegetation removal for temporary access and tower lay down sites would be mitigated through reclamation (re-vegetation) and post-construction monitoring.

In summary, impacts to sensitive viewers and landscape scenic quality would be minimal due to the siting of the proposed project in a BLM designated utility corridor adjacent to the existing PVNGS-Kyrene 500kV line and gas pipeline corridor. In addition, the proposed project would be constructed using dulled steel structures and non-specular conductors. Placement of structures would also match the spanning of the existing PVNGS-Kyrene 500kV line. Following is a discussion on visual contrast evaluation, compliance with visual management objectives, impacts to scenic quality, impacts to sensitive viewers, and mitigation measures.

3.2.2.4 Compliance with Agency Visual Management Objectives

The proposed action is compliant and consistent with the VRM objectives for VRM classes III and IV because the proposed action would occur in a designated utility corridor and only crosses class IV landscapes.

3.2.3 No Action Alternative

No impacts to visual resources would occur if the no-action alternative is selected.

3.3 CULTURAL RESOURCES AND NATIVE AMERICAN CONCERNS

3.3.1 Affected Environment

A cultural resources investigation was initiated to determine whether any historic sites and structures or archaeological sites are in the vicinity of the proposed Hassayampa to Jojoba 500kV transmission line, and how they might be affected by the construction of the line. The analysis was based on a records review at a number of agencies and research institutions, including the following:

- Arizona State Historic Preservation Office
- Arizona State Museum
- Department of Anthropology at Arizona State University

- Museum of Northern Arizona
- State and Phoenix Field offices of the BLM

The goal of the review was to identify any prior cultural resource surveys and recorded archaeological and historical sites within approximately 1 mile of the proposed route. In addition, a field survey of approximately 874 acres along the proposed transmission line corridor was conducted from May 16 to May 24, 2002. The surveyed areas included:

- A 400-foot-wide, 9.2-mile-long (447 acres) corridor immediately west and south of the existing PVNGS-Kyrene 500kV line, starting at a distance of 100 feet from the line, from the Hassayampa Switchyard to near the western edge of the Gila River.

- A 400-foot-wide, 0.5-mile-long (24 acres) corridor immediately north of the existing PVNGS-Kyrene 500kV line, starting at a distance of 100 feet from the line, and west of the Gila River. This is the area where the proposed line will shift to the north to the existing structures and line.

- Two 200-foot-wide, 8.3-mile-long (402 acres) corridors immediately north and south of the existing PVNGS-Kyrene 500kV line, starting at a distance of 100 feet from the line, from the eastern edge of the Gila River to the Jojoba Switchyard.

- New spur roads had not been identified at the time of this survey. Any new spur roads in unsurveyed areas would be surveyed once they have been identified.

This section summarizes the results of the records review and field survey, which are being fully documented in a report to support the NEPA process for the project and compliance with Section 106 of the National Historic Preservation Act (NHPA).

3.3.1.1 Findings

The records review identified information compiled from 39 prior cultural resource studies conducted within 1 mile of the project area. These studies were undertaken in support of a variety of projects, including construction of the existing PVNGS-Kyrene 500kV line that the proposed route would parallel and construction of the Hassayampa and Jojoba switchyards, the end points of the proposed line.

A total of 37 archaeological and historical sites have been recorded within 1 mile of the project area.

Within 1 mile of the project area, 16 of the historic properties are either listed or considered eligible for inclusion on the State and National Registers of Historic Places and 14 of the properties are not Register eligible. An additional seven of the properties are of unknown status.

The field survey resulted in the identification of 8 historic and archaeological sites recommended eligible for inclusion on the State and National Registers of Historic Places within or immediately adjacent to the proposed transmission line corridor, including 1 newly identified archaeological site (AZ T:13:125 [ASM]) and 7 previously identified historic and archaeological sites. Sites are listed below.

- AZ T:9:5 (ASM)
- AZ T:10:84 (ASM) [AZ Z:2:40 (ASM)]: Southern Pacific Railroad
- AZ T:13:18 (ASM) Gillespie Dam Site
- AZ T:13:21 (ASM)
- AZ T:13:121 (ASM)
- AZ T:13:125 (ASM)
- AZ Z:2:66 (ASM): Gila Bend Canal
- Enterprise Canal

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

It is anticipated that direct impacts to 7 of the 8 sites can be avoided by careful placement of the new structures. Although the final construction designs are not complete, with the available information it appears that just one archaeological site, site AZ T:13:18 (ASM), Gillespie Dam Site, within the affected area that is recommended eligible for NRHP listing appears to be potentially threatened by ground-disturbing activities associated with the proposed development of the project. Although GBPP is making an effort to span the site, it is anticipated that a new transmission line tower will need to be constructed within site AZ T:13:18 (ASM). If the site cannot be avoided, it will be necessary to develop and implement an archaeological testing/data recovery plan.

The proposed line must also cross the historic Southern Pacific Railroad, Gila Bend Canal, Enterprise Canal and Old U.S. Highway 80 and associated features. These properties would be spanned by the new line and would not be directly impacted by construction activities. In addition, the installation of the line is not anticipated to have any indirect effects on the eligible properties within the project area. Auditory and atmospheric effects associated with construction activities would be minimal and of limited duration, and the settings of these properties had been previously altered by the existing PVNGS-Kyrene 500kV line; therefore, the selected crossings for the new line would result in minimal visual intrusions into the more pristine settings.

The proposed project would not directly affect any of the NRHP eligible or listed properties located beyond the area of potential effect. This includes the Gillespie Dam Highway Bridge; the only listed property within the study area. Because the proposed transmission line would be constructed immediately adjacent to an existing transmission line, there would not be any

indirect (visual, atmospheric, or auditory) effects to properties beyond the area of potential effect.

3.3.2.2 No Action

No impacts to cultural resources would occur if the no action alternative is selected.

3.4 BIOLOGICAL RESOURCES

3.4.1 Affected Environment

3.4.1.1 Vegetation

Sonoran Desert plant associations dominate lands traversed by the proposed Hassayampa to Jojoba 500kV electrical transmission line. Components of both the Lower Colorado River Valley and Arizona Upland Subdivisions of the Sonoran Desert are present (Turner & Brown 1994). The Lower Colorado River Valley Subdivision typically occupies alluvial valley floors and is dominated by creosote bush (*Larrea tridentata*) or saltbush (*Atriplex* sp.) in association with a number of other low-growing, shrubby species. In this subdivision, larger tree species are present along drainageways but do not generally occur on interwash flats. Alluvial plains in the vicinity of this project are largely dominated by creosote bush although there are local occurrences of saltbush. Other plant species present include white bursage (*Ambrosia dumosa*), range ratany (*Krameria grayi*), wolfberry (*Lycium* sp.), desert zinnia (*Zinnia acerosa*), pincushion (*Mammillaria* sp.), barrel cactus (*Ferocactus wislizenii*), and chain-fruit cholla (*Opuntia fulgida*).

Arizona Upland elements are present on rocky slopes and along intermittent washes and runnels. The Upland Subdivision in the project vicinity is represented by the paloverde-mixed cacti series. This subdivision is much more diverse floristically than the Lower Colorado River Valley Subdivision. Several species of trees are characteristic including foothill paloverde (*Parkinsonia microphylla*), blue paloverde (*P. florida*), western honey mesquite (*Prosopis glandulosa* var *torreyana*), and ironwood (*Olneya tesota*). In the project vicinity, larger individual trees are largely restricted to washes. Shrub species that are typical include catclaw acacia (*Acacia greggii*), whitethorn (*A. constricta*), desert hackberry (*Celtis pallida*), graythorn (*Zizyphus obtusifolia*), Anderson thornbush (*Lycium andersonii*), and creosote bush. Rocky hillsides often support dense stands of brittlebush (*Encelia farinosa*) and teddy bear cholla (*Opuntia bigelovii*). Cacti include saguaro (*Cereus giganteus*), prickly pear (*Opuntia phaeacantha*), hedgehog (*Echinocereus engelmannii*), chain-fruit cholla, and barrel cactus.

In addition to the desert plant communities that dominate the region, mesic riparian habitats are present along the Gila River above and below Gillespie Dam. Historically, riparian habitats along perennial streams in southern Arizona were dominated by associations of cottonwood (*Populus fremontii*) and willow (*Salix nigra*). In the early twentieth century, salt cedar (*Tamarix*

ramosissima) became widely naturalized in the Southwest and ultimately came to dominate most streamside habitats in the Colorado River drainage, including the Gila River. This project crosses the Gila River just downstream from Gillespie Dam. Domination of the riparian community by salt cedar at this location is nearly 100 percent. There are scattered, generally small cottonwoods and willows in the crossing vicinity, but salt cedar is the overwhelming dominant.

3.4.1.2 Wildlife

Wildlife species present in the project area are typical of those found in the Arizona Upland and Lower Colorado River Valley subdivisions of Sonoran Desert. An abundance of bird, mammal, and amphibian and reptile species are common in the Sonoran Desert. Several species of fish are likely to be found in perennial waters within the project area. Tables listing many of the species that could be found in the vicinity of the project are included in Appendix C.

3.4.1.3 Special Status Species

Special status wildlife and plant species that potentially occur within the site vicinity are listed in Table 3-3 located at the end of this chapter. These include species listed as endangered or threatened under the Endangered Species Act, those considered candidate and species of special concern by the U.S. Fish and Wildlife Service (USFWS), Wildlife of Special Concern identified by the Arizona Game and Fish Department (AGFD), or Highly Safeguarded plants by the Arizona Department of Agriculture (ADA). These lists were compiled using information obtained from the AGFD, USFWS, and the ADA for a similar project that is located in the vicinity of the proposed project.

3.4.1.4 Invasive Species

An invasive species is one that is 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health (U.S. Department of Agriculture 2002). Invasive species may be virtually any type of living organism including plants, animals, and microbes. Invasive species may be introduced into an ecosystem via natural or man-made pathways. Winds and currents are natural means by which species may be introduced. Man-made pathways may result in intentional or unintentional introductions. Intentional introductions include moving seeds, whole plants, or animals into ecosystems where they do not normally occur. Pathways that may result in unintentional introductions include such things as ballast water discharge, soils associated with nursery stocks, importation of fruits and vegetables, and the international movements of human beings.

Invasive plant species present or likely to be present in the Hassayampa to Jojoba project area include salt cedar (*Tamarix ramosissima*), red brome (*Bromus rubens*), star thistle (*Centaurea*

sp.), and camelthorn (*Alhagi camelorum*). There are few species of invasive vertebrates likely to be present in the project area. Invasive aquatic species that may be associated with irrigation canals include several species of non-native fish including green sunfish (*Lepomis cyanellus*), carp (*Cyprinus carpio*), red shiner (*Notropis lutrensis*), cichlids (*Tilapia* sp.), and several species of aquarium fishes. It is likely that Asian clams (*Corbicula fluminea*) and crayfish (*Cambarus* sp.) are present in irrigation canals. Non-aquatic species include European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), house mouse (*Mus musculus*), and possibly black rat (*Rattus rattus*).

3.4.1.5 Rangeland Health

The proposed project crosses six designated BLM grazing allotments: A Lazy T. Layton, Jagow-Kreuger, Hazen-Shepard, Hazen, and Arnold. All of the BLM rangelands crossed in these allotments are Sonoran Desertscrub-dominated lands that are ephemeral.

3.4.1.6 Wetland/Riparian Habitats

Natural wetland and riparian habitats in the project area are associated with the Gila River. At the point where the Hassayampa to Jojoba transmission line crosses the Gila River, riparian habitat is strongly dominated by salt cedar. There are scattered, small individuals of cottonwood (*Populus fremontii*), and Goodding willow (*Salix gooddingii*) along the river, mostly upstream of the proposed project crossing. Further upstream, above Gillespie Dam, there is usually standing water with associated emergent vegetation of cattail (*Typha* sp.) and bulrush (*Scirpus* sp.) with adjacent salt cedar, cottonwood, willow, and mesquite (*Prosopis velutina/P. glandulosa*).

Human-created wetlands are associated with agricultural activities and include canals, ditches, and overflow areas. There are no well-developed riparian habitats associated with any of the agricultural amenities in the project area.

3.4.2 Environmental Consequences

3.4.2.1 Vegetation

Under the proposed action, vegetation would be cleared for construction of the transmission line. In areas utilized for towers and spur roads, vegetation will be permanently removed. In temporary laydown areas, vegetation will have a chance to grow back once construction has been completed.

Impacts on native vegetation associated with construction of the proposed project are not expected to be significant. The species and communities found in the project area are extensive in the region.

3.4.2.2 Wildlife

Construction of the proposed project may have an impact on wildlife populations within the vicinity of the project. Direct impacts to reptiles and fossorial mammals could occur during construction of the project although such impacts are expected to be minimal. Indirect impacts to wildlife include potential disturbance during construction. Such impacts are expected to be temporary and minimal.

Fish present in the Gila River and the Gila Bend and Enterprise canals would not be affected by this project. The proposed transmission line would span the canals, and the tower that would be closest to the Gila River would be placed in a dry area within the floodplain.

3.4.2.3 Threatened and Endangered Species

Four species that are federally listed by the USFWS may be found in the vicinity of the proposed project. All four species of wildlife are endangered. Project-related impacts on these species are addressed below.

Lesser long-nosed bats (*Leptonycteris curasoae yerbabuenae*) roost in caves and mine shafts and forage at columnar cacti and agave flowers. However, there are no known roost sites in the project area, and the project area lacks the density of columnar cacti foraging habitat for the lesser long-nosed bat. This project will have no effect on lesser long-nosed bats.

The Yuma clapper rail (*Rallus longirostris yumanensis*) is a rare summer resident of cattail marshes on the Gila River (Witzeman et al. 1997). It could be present near Gillespie Dam. The towers that support the proposed transmission line will not be located in marsh areas, so the Yuma clapper rail would not be affected.

Native vegetation along certain washes in the vicinity of the proposed transmission line route is not suitable habitat for the endangered cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*). Habitat components are present, but tree canopy along the washes is discontinuous, and the structural diversity and canopy cover preferred by the owls is generally lacking. Surveys for pygmy-owls were completed along washes that cross the proposed transmission line and support potential habitat for this species. Surveys were carried out following the survey protocol released by AGFD and USFWS in January 2000. No cactus ferruginous pygmy-owls were detected during surveys on this route in 2001 or 2002. The proposed project would not affect cactus ferruginous pymgy-owl.

Southwestern willow flycatchers (*Empidonax traillii extimus*) may find habitat in the dense salt cedar (*Tamarix ramosissima*) where the proposed transmission line crosses the Gila River. Surveys for these flycatchers must be carried out during their season of occurrence immediately preceding construction. If surveys indicate presence of southwestern willow

flycatchers in the project area, work in this area may have to be halted during breeding season.

3.4.2.4 Special Status Species

A variety of special status wildlife and plant species may be found in the vicinity of the proposed project. These include species that are of special concern to the USFWS but are not listed, wildlife species of special concern in Arizona, and plants protected under the Arizona Native Plant Law. Impacts to these species are not expected to be significant, and mitigation measures would be implemented according to state and federal guidelines to minimize potential disturbances to special status species and habitat. Impacts to sensitive species of plants and animals that may be affected by the project are addressed below.

Threats to California leaf-nosed bats (*Macrotus californicus*) include vandalism at roost sites and a general lack of suitable winter roost sites. Winter roost sties must be warm because prolonged exposures to temperatures below 78 degrees Fahrenheit can be fatal to this species (AGFD 1993). This species roosts in caves and mine shafts. Desert scrub vegetation may provide foraging habitat for the California leaf-nosed bat. Construction of this project and post-construction presence of project facilities should not have an impact on this species.

Cave myotis (*Myotis velifer*) are found in mine shafts, tunnels, caves, and under bridges in the desert. They inhabit areas within a few miles of a water source such as tanks, canals, or creeks. The Gila Bend and Enterprise canals and the Gila River would constitute sources of water in the project area. Construction of the project and post-construction presence of project facilities should not have an impact on this species.

The western least bittern (*Ixobrychus exilis hesperis*) is a common summer resident of marshy areas with emergent vegetation; therefore, this species may be found on the Gila River near Gillespie Dam. The proposed transmission line will not affect any emergent wetlands. Therefore, no impacts on the western least bittern would occur.

Great egrets (*Ardea alba*) and snowy egrets (*Egretta thula*) may be present along the Gila Bend and Enterprise canals where they forage along the water edge. Snowy egrets may also forage in agricultural fields in the vicinity of the project. Breeding by these egrets is restricted to areas along the Colorado River and is not expected in the study area (Witzeman et al. 1997). Neither of these species is likely to be affected by construction of the project. Minor collision hazard potential would exist for the life of the project with the possibility of egrets colliding with conductors or static lines, especially when birds are moving up or down the Gila River at night.

Ferruginous hawks (*Buteo regalis*) and peregrine falcons (*Falco peregrinus*) may utilize the vicinity of the transmission line route during migration or winter. Towers that support the proposed transmission line could provide perching locations for these species. Peregrines, in

particular, utilize tall structures (cliffs, buildings, and power poles). Because the structures will be constructed according to AGFD recommended raptor-safe guidelines, no negative impacts are anticipated.

It is possible that the western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) could occupy areas along the Gila River during the summer months. The proposed crossing of the Gila River by this transmission line is located in an area below Gillespie Dam that does not support the type of riparian vegetation (cottonwood-willow) that is preferred by this species. Consequently, potential impacts on this species would not occur.

Belted kingfishers (*Ceryle alcyon*) may forage along the Gila Bend and Enterprise canals during the winter. This species is not expected to breed in the vicinity of the proposed project because it is generally a winter visitor. Nesting by this species in Arizona is very unusual although not unknown (Monson and Phillips 1981). It is unlikely that construction of the project or post-construction presence of project facilities would have any effect on this species.

Lowland leopard frogs (*Rana yavapaiensis*) are present in areas of the upper Gila and Agua Fria rivers, but have been extirpated from the lower Gila River. This species could potentially utilize the Gila Bend and Enterprise canals; however, the chance of this occurring is extremely low. Because the project would span and not impact these canals, no impacts to this species are expected.

Sonoran desert tortoises (*Gopherus agassazii*) occur in desert mountains, rocky areas, caliche washes, and bajadas in desert scrub vegetation communities. They may be present within the rocky hills northwest of the Gila River crossing. The Sonoran population is managed as wildlife of special concern by the AGFD and is on the BLM sensitive species list. Lands traversed by the proposed project are not included in BLM's Category I or Category II tortoise habitat designation. Consequently, the BLM would not require construction monitoring for this species.

Crested or fan-top saguaros are a rare growth form caused by freezing or mechanical injury to the saguaro's apical meristem (Steenbergh and Lowe 1983). The crested saguaro is listed as highly safeguarded in Arizona. This growth form could be present wherever saguaros are found in the study area. No crested saguaros have been observed during fieldwork for the project.

3.4.2.5 Invasive Species

Construction of the Hassayampa to Jojoba transmission line is unlikely to result in the introduction of any new invasive species. Soil disturbance around tower sites and along access roads may enhance conditions for some species such as red brome and star thistle. It is unlikely

that any aspect of construction and operation of the line will enhance the spread of salt cedar along the Gila River and on irrigation canals.

3.4.2.6 Rangeland Health

Construction of the Hassayampa to Jojoba transmission line will have minimal effects on rangeland conditions in Maricopa County. Permanent loss of grazing land would occur at tower sites and associated spur roads. Temporary loss of grazing land would occur at temporary work areas and line tensioning/pulling sites.

3.4.2.7 Wetland/Riparian Habitats

Construction of the Hassayampa to Jojoba transmission line may result in some impact to salt cedar-dominated habitats along the Gila River, if it is necessary to place a structure and access road in the Gila River floodplain. The habitat likely to be affected is of relatively low value to most species and impacts are not considered to be substantial.

3.5 SOCIOECONOMICS

3.5.1 Affected Environment

Given that the location of the study area primarily occurs in rural, unincorporated Maricopa County, a variety of sources were used to collect socioeconomic data for this study. Socioeconomic information was primarily collected from the *Tonopah/Arlington Area Plan,* updated in 2001 to conform to the *Eye to the Future 2020, the Maricopa County Comprehensive Plan* completed in October 1997. The dates of census data from the Tonopah/Arlington Area plan vary, but primarily use the 1995 special census. A significant portion of the study area falls within the jurisdiction of the *Tonopah/Arlington Area Plan.* Demographic, economic, and land use data from that document have been referenced for the purposes of this study.

Additionally, some of the information referenced in this section has been collected from community profile information on the town of Buckeye prepared by the Arizona departments of Commerce and Health Services. These data reference Census 2000.

The study area is located near the towns of Arlington and Hassayampa and in Buckeye. It includes many sparsely populated areas of unincorporated, rural Maricopa County. The general topographic character within the study area has been described as creosote flatlands surrounded by rolling hills and steep mountains. Agricultural fields are dispersed throughout the study area with the majority occurring within the Gila River floodplain, which bisects the study area northwest to southeast.

3.5.1.1 Principal Economic Activities

According to the *Tonopah/Arlington Area Plan*, the economic base of this area is "modest" and "characterized by scattered low-density residential development, large undeveloped areas, and other areas of open desert." PVNGS plays a major role in the local economy and work force of this area. The facility has an estimated 2,800 permanent on-site employees. The town of Buckeye and the surrounding area is a leading producer of Pima cotton.

Key developments within the study area include PVNGS and power plant facilities at Redhawk and Arlington, both under construction. The existing PVNGS-Kyrene 500kV line runs from PVNGS through the center of the study area. The Arizona State Prison Complex, Lewis Facility is located about ½ mile south of the proposed 500kV transmission line route, adjacent to State Route 85, within the town of Buckeye. The prison has a maximum capacity of 1,161 inmates.

Very little residential development occurs in the study area; however, there are some residential areas located in the south-central portions and northern portions of the study area, east of PVNGS. Some increased residential development has occurred in the vicinity of Tonopah and Arlington in recent years as residents seek large lot, rural setting home sites.

The eastern portion of the study area is crossed by State Route 85, which runs north and south through the study area. This stretch of State Route 85 serves to link Interstate 10 and Interstate 8, which crosses State Route 85 in the town of Gila Bend. Old U.S. Highway 80 crosses the central portion of the study area, crossing the Gila River at the Gillespie Dam.

3.5.1.2 Income and Employment

Data collected from the town of Buckeye indicate an unemployment rate for the area of 5.5 percent in 2000. The unemployment rate for the entirety of Maricopa County was 2.8 percent for the same period. The median household income for the same area was $24,556 in the year 2000. Figures from the *Tonopah/Arlington Area Plan* indicate a median household income of $22,529 for the area covered by that plan. The top private sector employer within the town of Buckeye is the PVNGS.

3.5.1.3 Environmental Justice

Presidential Executive Order 12898 (EO 12898), regarding "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires that each federal agency identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its program, policies, and activities on minority populations and low income populations.

Buckeye has a higher percentage of Hispanic people than the whole of Maricopa County. According to the 2000 census data, the ethnic diversity in Buckeye was 24.3 percent Hispanic, 70.9 percent White, 1.4 percent American Indian, 2.9 percent African American, 0.5 percent Asian/Pacific Islander, and 0.1 percent other races. Maricopa County recorded 66.2 percent White, 24.8 percent Hispanic, 3.5 percent Black, 2.1 percent Asian, 1.5 percent American Indian, and 1.6 percent two or more races.

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action

The primary effects to socioeconomics for the proposed transmission line project include construction period and fiscal impacts to local jurisdictions. In general, the surrounding communities of Hassayampa, Arlington, and Buckeye would likely experience an increase in employment and income from the project construction. Any local hiring would primarily be laborers and depend on the skills of individuals. Other social impacts would include potential short-term impacts from the influx of construction workers such as short-term housing or motel use. Long-term impacts could include economic effects of operation and maintenance activities and tax revenue from easements through lands in Maricopa County.

Impacts on Minority and Low Income Communities

No disproportionately high or adverse environmental impacts on Native Americans or minority or low-income communities in surrounding areas are anticipated to occur from the proposed action. The proposed project would potentially provide jobs to minority and low-income communities and positive economic effects associated with tax revenues.

Public contact activities that occurred to ensure that appropriate notification of the proposed project was provided are described in Chapter 5.

3.5.2.2 No Action

Selection of the no-action alternative would result in loss of economic and employment benefits and tax revenues of the transmission facilities.

3.6 EARTH AND WATER RESOURCES

3.6.1 Affected Environment

3.6.1.1 Geology

The study area is a part of the Basin and Range geologic province of the Southwest. This geologic province extends from the southeast corner to the far northwestern edge of Arizona and is characterized by linear northeast-southwest formations (Chronic 1983).

The majority of the study corridor includes older surficial deposits characterized as containing alluvium with less abundant talus and eolian deposits. Young alluvium follows the Gila River and is characterized as containing deposits in present-day river and stream channels, floodplains, and playas (Arizona Geological Society [AZGS] 1988). The dark hills in the Tonopah area consist of tertiary volcanic rocks and a few Quaternary lava flows (Chronic 1983). The area around Gillespie Dam includes volcanic rocks of the Quaternary Age, such as basalt and tuff. The majority of the Buckeye Hills area is made of deeply eroded metamorphic core complex. The southeastern portion of the Buckeye Hills area is made up of granite of the Laramide, Mesozoic, and Precambrian Age. No serious slope conditions in terms of major slides were observed within the corridor (USDI 1980).

3.6.1.2 Soils

Soil development in the study area comes from two main sources of parent material – alluvium and hard bedrock. The majority of the soils come from alluvium (both recent and old), which in turn comes from a variety of sources including igneous and sedimentary rocks. Soils found on rock outcrop both west and east of Gillespie Dam are derived mainly of basalt rocks. Soils found in the Gila River channel are frequently flooded (U.S. Department of Agriculture 1977, 1997).

Although vegetative cover in the study area is sparse, the quantities of runoff generated are low because of the small amounts of rainfall received in the area. The low slope gradients of soils in the majority of the study area keep the erosion potential down. In this study corridor, wind erosion is not believed to be a significant force on undisturbed soil surfaces (USDI 1980).

3.6.1.3 Water Resources

The study area contains portions of the Centennial Wash and Lower Gila-Painted Rock Reservoir watersheds (EPA www.epa.gov). The Gila River and the Gila Bend Canal are located in the middle portion of the study area. As the project goes south from the Hassayampa Switchyard it crosses Centennial Wash, then turns east and crosses the Enterprise and Gila Bend canals and Gila River. On the eastern side of the study area, the project crosses Rainbow Wash. The groundwater in the study area is managed by the Arizona Department of Water Resources

(ADWR) and is included in the Phoenix Active Management Area (ADWR www.adwr.state.az.us).

The Federal Emergency Management Agency has delineated the 100-year floodplain within the study area. Areas within the floodplain include Centennial and Winters washes in the western portion of the study area, the Gila River and Gillespie Dam area, and Watermelon Wash in the eastern portion of the study area. Designs for structures to be built within the floodplain of the Gila River would be reviewed by Maricopa County Flood Control District and the Army Corps of Engineers.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action

Impacts to earth resources for this project are generally related to soils and may include an increase in soil erosion, compaction, and mixing of soil horizons, thereby temporarily reducing soil productivity and reclamation potential. Compaction of soil and mixing of soil horizons are expected to be minimal. Impacts on soil are expected to be minimal. Project design includes spanning washes where possible, using existing access roads, limiting surface disturbance, and restoring vegetation to the extent practicable; therefore, increases in erosion potential are expected to be minimal and short term. In those areas with desert pavement, minimal surface disturbance would retain the existing desert pavement and reduce the potential for increased surface erosion.

3.6.2.2 Hazardous and Solid Wastes

Construction of the line would create small quantities of construction wastes, which would be disposed of in an appropriate manner. Surface contamination could occur, resulting from accidental spills of petroleum and other potentially hazardous materials used in construction activities. The potential for soil contamination is reduced by requiring prompt removal of petroleum and other hazardous materials.

3.6.2.3 No Action

No impacts would occur to the earth and water resources if this alternative were chosen.

3.7 AIR QUALITY AND NOISE

3.7.1 Affected Environment

The project area is designated "attainment" for all criteria pollutants. Additionally, the project is located a distance of more than 50 miles from the nearest Class I wilderness area, such as Superstition and Mazatzal wilderness areas and more than 2 miles from the nearest Class II wilderness area, such as the North Maricopa Mountains and Woolsey Peak.

The project is not expected to have any adverse impact on Class I or II air quality related values such as visibility, wildlife, or vegetation. The existing air quality along the proposed corridor is generally good. Any pollution is from naturally occurring blowing dust or long-range pollutants from distant areas such as Phoenix.

Ambient noise along the proposed corridor is minimal with intermittent noises from passing vehicles on State Route 85 and Old U.S. Highway 80.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action

Construction activities would result in fugitive dust emissions due to earth-moving activities at the transmission structure sites. In addition, vehicular travel and operation of construction equipment would generate engine exhaust emissions. Emissions would be managed to comply with applicable federal, state, and local requirements. Fugitive emissions would be reduced through the use of watering and/or surface stabilization measures as required to comply with Maricopa County rules. Engine exhaust emissions would be controlled through engine maintenance programs and limits on the duration of engine idling. There would be no measurable air emissions associated with operation of the line.

Historical noise measurements along transmission corridors in similar settings (open desert) have shown normal ambient audible noise levels in the range of 43 to 52 decibels, A-weighted (dBA) with an average value of 50 dBA (USDI 1980). The line noise would normally be inaudible at the edge of the right-of-way during fair weather. Considering the relatively few hours of audible noise producing weather, the location of the line with respect to neighboring land uses, and the calculated audible noise levels during foul weather, no serious audible noise impacts are expected.

3.7.2.2 No Action

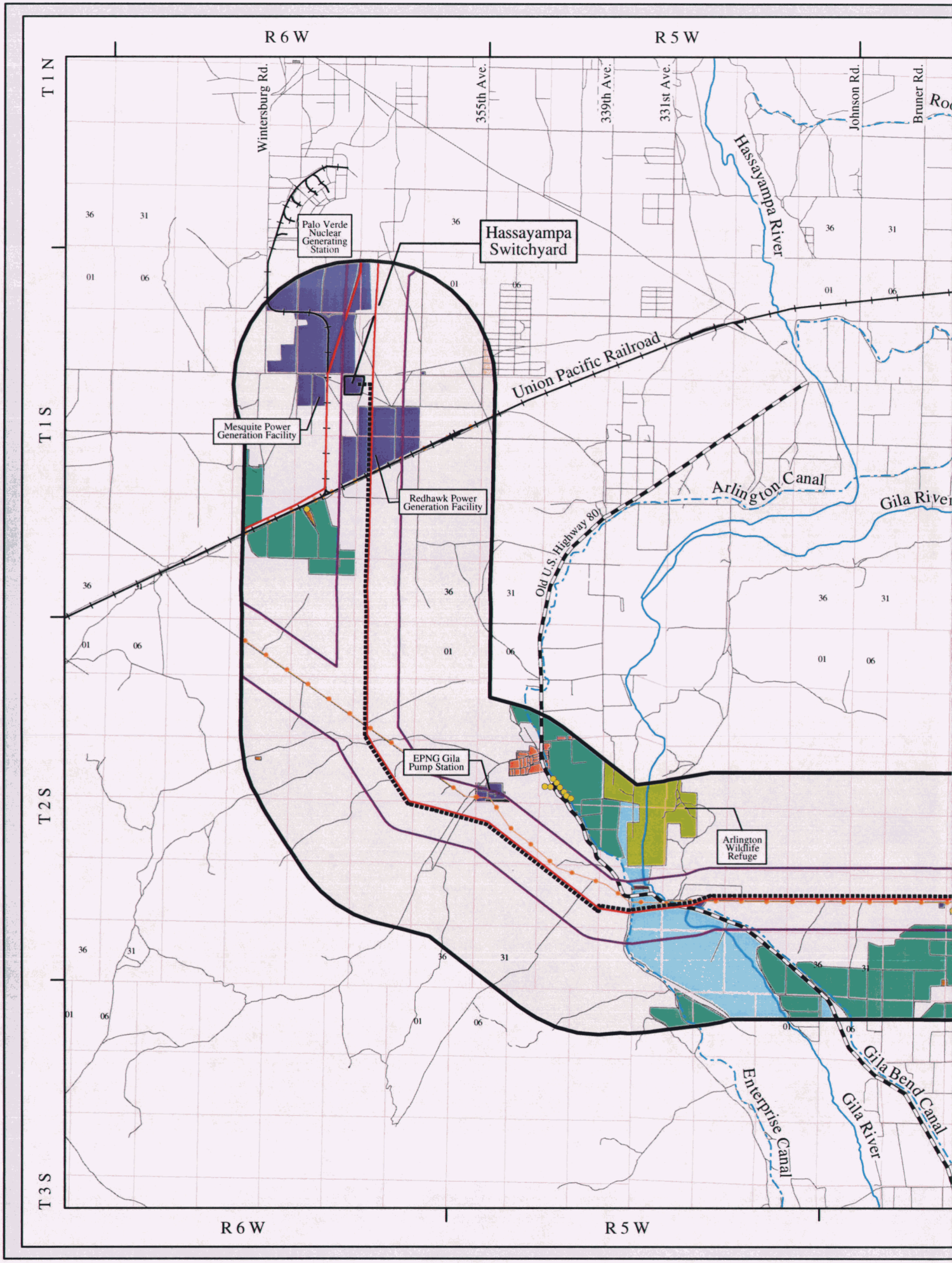
No impacts would occur from noise and air quality if this alternative were chosen.

TABLE 3-2
SPECIAL STATUS WILDLIFE AND PLANT SPECIES THAT COULD OCCUR WITHIN THE PROJECT VICINITY

Key:
Federal Status: E = Endangered T = Threatened C = Candidate SC = Special Concern
State Status: WC = Wildlife of Special Concern HS = Highly Safeguarded

Common Name	Scientific Name	Habitat	Federal Status	State Status
Mammals				
California leaf-nosed bat	*Macrotus californicus*	Primarily cave and mine dwellers, mostly in Sonoran desertscrub	SC	WC
Lesser long-nosed bat	*Leptonycteris curasoae yerbabuenae*	Desertscrub with agave and columnar cacti present as food plants	E	WC
Cave myotis	*Myotis velifer*	Desertscrub with caves or mine tunnels and water nearby	SC	
Birds				
Western least bittern	*Ixobrychus exilis hesperis*	Marshy areas of emergent vegetation	SC	WC
Great egret	*Ardea alba*	Ponds, streams, and marshes		WC
Snowy egret	*Egretta thula*	Ponds, streams, and marshes		WC
Osprey	*Pandion haliaetus*	Near lakes and streams		WC
Bald eagle	*Haliaeetus leucocephalus*	Lakes and rivers	T	WC
Ferruginous hawk	*Buteo regalis*	Dry open country, fields		WC
Peregrine falcon	*Falco peregrinus*	Cliffs, generally distributed, tops of tall urban buildings		WC
Yuma clapper rail	*Rallus longirostris yumanensis*	Cattail marshes	E	WC
Cactus ferruginous pygmy-owl	*Glaucidium brasilianum cactorum*	Mature cottonwood/willow, mesquite bosques, and Sonoran desertscrub	E	WC
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Riparian areas	C	WC
Belted kingfisher	*Ceryle alcyon*	Ponds, streams, and canals		WC
Southwestern willow flycatcher	*Empidonax traillii extimus*	Areas of willow, tamarix, cottonwood with a well developed lower canopy	E	WC
Reptiles and Amphibians				
Lowland leopard frog	*Rana yavapaiensis*	Restricted to permanent waters: pools of foothill streams, overflow ponds below 4,800-foot elevation	SC	WC
Desert tortoise	*Gopherus agassizii*	Riverbanks, washes, dunes, and rocky slopes	SC	WC
Plants				
Crested or Fan-top saguaro	*Carnegiea gigantea*	Rocky hillsides and outwash slopes		HS

Sources: Arizona Department of Agriculture 1994, 2002; Arizona Game and Fish Department 1996; Hoffmeister 1986; Minckley 1971; Monson and Phillips 1981; Stebbins 1985; USFWS 1999, 2002a, 2002b; Witzeman et al. 1997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Wintersburg Rd.
355th Ave.
339th Ave.
331st Ave.
Johnson Rd.
Bruner Rd.
Hassayampa River
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Union Pacific Railroad
Mesquite Power Generation Facility
Redhawk Power Generation Facility
Arlington Canal
Old U.S. Highway 80
EPNG Gila Pump Station
Arlington Wildlife Refuge
Gila River
Gila Bend Canal
Enterprise Canal

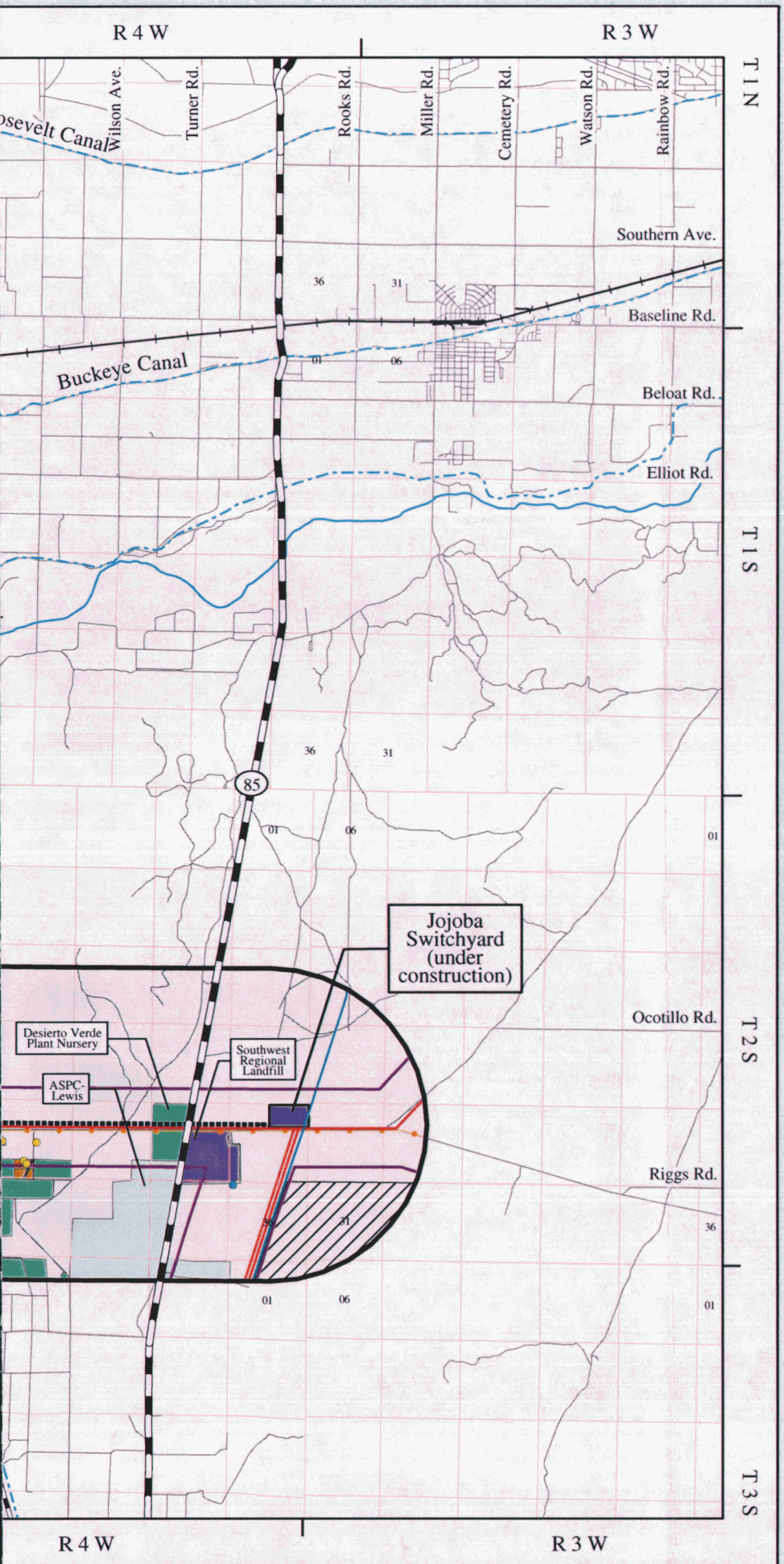

Figure 3-1

Existing Land Use

Hassayampa to Jojoba
500kV Transmission Line Project

Gila Bend Power Partners, L.L.C.

- Residential Low Density
- Abandoned Residence/ Farm Complex
- Prison (ASPC-Lewis)
- General Industrial/Utilities
- Airstrip
- Farm Complex
- Irrigated Farmland
- Wildlife Area
- Dam
- Riverbed
- Vacant/ Undeveloped
- Single Family Residence
- Outstructure

General Reference Features

- Proposed Transmission Line Route
- Study Area Boundary
- BLM Designated Utility Corridor
- Sonoran Desert National Monument
- 500kV Transmission Line
- 230kV Transmission Line
- Gas/Oil Pipeline Corridor
- State Route
- Old U.S. Highway 80
- Road
- Railroad
- Canal
- River
- Section Line

Sources:
Space Imaging. August, 1999. USGS Landsat Imagery.
May 2002. Arizona State Land Department. 2000. Modified.

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epg environmental planning group

m:/projects/gbpp/hass-jojoba/mxds/fig3_1.mxd September 12, 2002

CHAPTER 4
CUMULATIVE IMPACTS

Cumulative impact, as defined by the Council on Environmental Quality (40 CFR 1508.7), is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts are interdisciplinary, multi-jurisdictional, and usually do not conform to political boundaries.

4.1 METHOD

To determine the cumulative effects in the analysis area, past, present, and future actions were evaluated. In addition, the analysis focused on meaningful effects related to long-term productivity of the resources analyzed. Impacts to vegetation, soils, wildlife habitat, cultural resources, grazing, and dispersed recreation are accounted for by estimating the incremental extent of land area affected by activities that take place within the analysis boundary. The cumulative impact analysis area for this project is defined for the resource being analyzed. To address cumulative impacts that result from ground disturbance, an analysis area was defined to include all five grazing allotments that are, in part, affected by the proposed action. Grazing allotments including BLM, state, and private lands and their acreages crossed by the proposed project include:

- A Lazy T (approximately 18,973 acres)
- Hazen-Shepard (approximately 35,731 acres)
- Hazen (approximately 22,218 acres)
- Jagow-Kreuger (approximately 13,184 acres)
- Layton (approximately 6,779 acres)

The cumulative analysis area defined to address impacts to key observation points (KOPs) and to scenic quality is a 4-mile-wide study corridor, within which visual impacts of the proposed actions have been assessed. Table 4-1 describes the activities (existing and proposed) that may cumulatively affect resources of concern for the Hassayampa to Jojoba Transmission Project.

4.2 FINDINGS

The proposed 500kV transmission line would connect at the Hassayampa Switchyard near PVNGS and at the Jojoba Switchyard, a distance of approximately 20 miles. The 500kV transmission line would cross BLM, state, and private lands. The proposed project would occur within a 1-mile-wide BLM-designated utility corridor on BLM lands.

4.2.1 Past and Present Development

Past and present development included in the cumulative impact analysis of the proposed project includes utilities, transportation, industrial uses, agricultural, and grazing activities. The PVNGS–Kyrene 500kV line parallels the proposed project for its entirety from the Hassayampa to Jojoba switchyards. El Paso Natural Gas owns three pipelines that parallel the proposed project from the Gila River to the Jojoba Switchyard. SR 85 and Old US Highway 80 both cross the project: SR 85 crosses the eastern side of the project and Old US Highway 80 crosses the project immediately east of the Gila River. The Southwest Regional Landfill and the ASPC Lewis (prison) are both located towards the eastern end of the proposed project. Irrigated farmland is located east of the Gila River and a plant nursery occurs west of SR 85. Development in the immediate vicinity of the Gila River crossing include the Gillespie Dam, Old U.S. Highway 80 and the bridge across the river, natural gas pipelines, and the PVNGS-Kyrene 500kV line.

4.2.2 Future Development

Future development plans addressed in the cumulative impact analysis include planned transmission lines, expansion of SR 85, and an expansion of the Southwest Regional Landfill.

Several other transmission lines are being or have been proposed for this same utility corridor. Three other transmission line projects are currently planned for this corridor including:

- SRP's Palo Verde to Pinal West and Pinal West to Southeast Valley/Build Out Browning 500kV Transmission Line Project - SRP is proposing two 500kV lines from the Hassayampa Switchyard to the planned Pinal West Substation and one 500kV line from Pinal West to the planned Southeast Valley Station. A right-of-way application was filed with the BLM on September 25, 2002 for the first segment of this line: Palo Verde to Pinal West.

- Sonora-Arizona Interconnection Project - PNM is proposing two 345kV transmission lines from the Hassayampa Switchyard to Sonora, Mexico using the same BLM utility corridor as the proposed project for the first approximate 20 miles from the Hassayampa to Jojoba switchyards. PNM filed an application for right-of-way with the BLM. The EIS process for this project, under the direction of the Department of Energy with BLM as a cooperating agency, is ongoing. PNM has indicated that the first segment of this project from Hassayampa to Jojoba could use available capacity from the GBPP or Southeast Valley 500kV lines, if they are constructed.

- The PVNGS-Saguaro 500kV Transmission Line Project (under a trust made up of several utility companies, with SRP as the trustee) - In the late 1970's as a part of the PVNGS project, four transmission lines were proposed from PVNGS to different termination points (PVNGS-Kyrene, PVNGS-Saguaro, and PVNGS-Westwing [two lines]). To date,

the PVNGS-Saguaro line is the only one of the four that has not been built. A right-of-way application for this line has not been filed with the BLM.

The Central Arizona Transmission System study (CATS) group composed of the major utility companies (including SRP, PNM, APS, TEP, among others) and other merchant plant companies (including GBPP, among others) has indicated that three 500kV lines, including the existing PVNGS-Kyrene 500kV line, in this corridor will be sufficient to meet the capacity of the various power projects. Therefore, for the purpose of addressing cumulative impacts, it was assumed that there would be a total of three 500kV lines in the corridor in the reasonable and foreseeable future.

The El Rio Project is a planning effort by the Maricopa County Flood Control District (MCFCD) for an area of the Gila River east of SR 85 to the confluence of the Gila and Agua Fria rivers. According to the MCFCD, there is no planned development for the Gila River from SR 85 going west and south to the Painted Rock Dam.

4.2.3 Summary of Cumulative Impacts

If the PNM Sonora-Arizona Interconnection Project, SRP Southeast Valley Project, and PVNGS-Saguaro line, along with the existing PVNGS-Kyrene and proposed GBPP line, are constructed, the utility corridor would contain seven transmission lines and the existing natural gas pipelines. BLM's designated utility corridor is one-mile-wide allowing enough room for all seven lines. However, as stated previously, it appears there is the need for only two additional 500kV lines in this corridor.

Information regarding the location of the right-of-way within the corridor for each of these projects was not available at the time this document was prepared. Each of these projects would cross various jurisdictions/ownership including BLM, State Trust, private, Maricopa County, and the Town of Buckeye. In addition, they would cross the Gila River, Centennial Wash, State Route 85, grazing lands, possibly residential properties, and the Desierto Verde plant nursery.

Based on the amount of land potentially disturbed, or taken out of use for grazing, the proposed action would have a minimal incremental impact in the cumulative analysis area. Grazing leases on BLM land are ephemeral and only used for grazing when conditions allow. Permanent long-term loss to grazing lands would occur at the structure footprint and spur road areas. For the purpose of this analysis, certain basic assumptions were made because details of other future projects were not known at the time of this study. Based on CATS, a total of three 500kV transmission lines (including the existing line) were analyzed. The additional structures were assumed to be the same type and span as the existing PVNGS-Kyrene 500kV line. A total of approximately 12 acres would be removed from grazing, which is less than one percent of the land area for the five grazing allotments affected by the proposed project. Moreover, the transmission lines would be installed within the designated 1-mile-wide utility corridor on lands

administrated by BLM thus consolidating transmission lines in a planned location, which is consistent with the RMP.

Cumulative impacts to cultural resources were evaluated within a 1-mile-wide corridor centered on the proposed transmission line, based on the class I cultural survey which was done for this area.

According to the 40 cultural resource surveys conducted throughout the study area (including the most recent survey conducted in May 2002 for the proposed project), 37 archaeological sites have been recorded. The 400-foot-wide corridor surveyed covered the likely location for a third 500kV transmission line. A mitigation plan would be developed in consultation with BLM and State Historic Preservation Office (SHPO) for any archaeological sites that cannot be avoided, and important information would be recovered and preserved prior to the start of construction. Future transmission line projects would not directly affect archaeological sites within the survey corridor if ground disturbance activities occurred outside site boundaries. Careful placement of new transmission line towers, work areas, and access roads beyond site boundaries would reduce incremental impacts to cultural resources within the survey corridor.

The incremental impact to biological resources associated with the proposed action will be minimal when viewed in the context of past, present, and reasonably foreseeable future actions. Impacts are related primarily to habitat loss associated with structure sites and access roads. There should be no cumulative effects to any federally listed threatened or endangered species. There is minimal potential of habitat occupancy by southwestern willow flycatcher at the crossing of Gila River due to the low quality of habitat present.

The incremental visual effect would be minor assuming the new transmission line will match existing tower spans and types (e.g. PVNGS-Kyrene) while using non-specular conductors. Existing access would be utilized for both the proposed and future 500kV line, which would avoid exposing lighter colored surface and vegetative removal. In areas where new access and vegetative removal are required, applied mitigation that would be effective in reducing visual impacts would include the reclamation and post construction monitoring of temporary construction areas disturbed by construction-related activities. Viewer impacts along Old U.S. Highway 80 and SR 85 where the line(s) would cross are dominated by the presence of the existing PVNGS-Kyrene 500kV line, ASPC-Lewis, and landfill. This would likely continue in the future and, therefore, the visual impact of the proposed project contributes a small increment to the overall impact to visual resources.

Based on this analysis, the incremental impact of the proposed action will be minimal when added to other past, present, and reasonably foreseeable future actions. The proposed Hassayampa to Jojoba Transmission Project will not contribute substantially to cumulative impacts on the environment.

TABLE 4-1 CUMULATIVE EFFECTS				
Activities	**Location/Description**	**Status[1]**	**Affected Area in Acres[2]**	**Anticipated Environmental Issues that Could be Cumulative**
Proposed Action-Hassayampa to Jojoba Transmission Project				
1. Hassayampa to Jojoba 500kV Transmission Line	The 500kV transmission line would connect from the Hassayampa Switchyard near PVNGS to the Jojoba Switchyard, a distance of approximately 20 miles.	F	6	■ The transmission line would remove up to 6 acres from grazing allotments. ■ Visual impacts are minimized due to parallel alignment in an existing utility corridor.
Future Utilities/Public Services				
1. Planned PVNGS to Saguaro 500kV Transmission Line	The 500kV transmission line would start at PVNGS and terminate at the Saguaro Power Plant paralleling the existing PVNGS-Kyrene 500kV line in the same corridor as the proposed project.	F	6	■ Minimal effects assuming proper mitigation; the line is located in an existing utility corridor. ■ It is anticipated that only one additional 500kV line will be built beyond the proposed project which could be this one or one of the other proposed lines.
2. Proposed Sonora Arizona Interconnection 345kV(2) transmission lines	The two 345kV transmission lines would start at either PVNGS or Hassayampa Switchyard and terminate in Sonora, Mexico.	F	6	■ Although the lines would be located in the existing utility corridor, they may have to be located south of existing pipelines resulting in greater impacts to visual resources and land use. ■ If the two PNM 345kV lines are replaced with one 500kV line (immediately adjacent to the existing and proposed lines), all cumulative impacts would be reduced. For this evaluation it is assumed proper mitigation would be implemented.
3. Proposed Southeast Valley 500kV Transmission Line	The 500kV transmission line would start at the Hassayampa Switchyard and parallel the PVNGS-Kyrene line past Jojoba Switchyard to a planned southeast valley switchyard.	F	6	■ Minimal effects assuming proper mitigation; the line is located in an existing utility corridor. ■ It is anticipated that only one additional 500kV line will be built beyond the proposed project which could be this one or one of the other proposed lines.

TABLE 4-1
CUMULATIVE EFFECTS

Activities	Location/Description	Status[1]	Affected Area in Acres[2]	Anticipated Environmental Issues that Could be Cumulative
Existing Utilities/Public Services				
1. PVNGS-Kyrene 500kV Transmission Line	PVNGS-Kyrene 500kV transmission line originates at the PVNGS Switchyard and parallels proposed route, ultimately ending at the Kyrene Substation in Tempe.	P, Pr	60	■ The 500kV transmission line is apparent in foreground views, low impacts at distant views. ■ The transmission line has had a negligible effect on grazing activities in this area.
2. El Paso Natural Gas Pipelines	El Paso Natural Gas pipelines are located within the same corridor in the eastern portion as the PVNGS to Kyrene and proposed transmission lines. East of the Jojoba Switchyard, the pipelines turn southeast.	P, Pr	69	■ The gas pipelines are underground thus having no long-term impact on grazing. However, the pipeline road displaces grazing land and vegetation.
3. Southwest Regional Landfill	Southwest Regional Landfill is located on private land, just south of the proposed route. Future plans (approximately 15 years) include expanding of the landfill.	P, Pr, F	Existing 290 Future Expansion 640	■ Impacts local scenic quality and views from SR 85. ■ Decreases potential grazing area.
4. SR 85	This arterial lies in a north-south direction on BLM and state land. Arizona Department of Transportation plans to upgrade the road to four lanes.	P, Pr, F	Existing 300 Upgrade 450	■ During the road upgrade construction temporary disturbance may occur to wildlife and soil erosion. ■ Native vegetation would be removed from the site. ■ Some land would be removed from grazing activities.
5. ASPC - Lewis	ASPC-Lewis is located about ½ mile south of the proposed 500kV transmission line route adjacent to SR 85, within the Town of Buckeye. The prison has the total capacity of 1,161 inmates.	P, Pr, F	1,200	■ The prison is a dominant feature in views from SR 85 in the northern portion of analysis area. ■ The prison displaces lands used for grazing.

TABLE 4-1 CUMULATIVE EFFECTS				
Activities	**Location/Description**	**Status[1]**	**Affected Area in Acres[2]**	**Anticipated Environmental Issues that Could be Cumulative**
Agriculture and Grazing				
1. Farming	Irrigated farmland within the study area.	P, Pr, F	4,400	■ The use of land for farming decreases the grazing area.
2. Nursery	Commercial operation on private land within the study area.	P, Pr	200	■ The presence of the nursery decreases grazing area.
3. Grazing – BLM, State, and Private	Throughout project area	P, PR, F	96,885	■ Grazing activity requires rangeland management to maintain or improve resource conditions.

[1]P = past Pr = present F = future
[2]Affected areas are estimated according to aerial photograph interpretation and measurement of disturbed land areas.

CHAPTER 5
CONSULTATION AND COORDINATION

5.1 PUBLIC CONTACT INFORMATION

In preparation of the EA and as part of the public information program for the Hassayampa to Jojoba Transmission Project, a letter was prepared and mailed in June 2002 to both inform and request comments from agencies, individuals, and organizations. The letters, which provided information about the proposed project and the preparation of the EA in accordance with NEPA, were sent to approximately 375 agencies, individuals, and companies contained in the BLM database as well as various landowners and grazing alottees along the route. A copy of the letter can be found in Appendix D. For inquiries regarding the mailing list, please contact EPG. A list of key agencies and organizations contacted is included in the following table.

KEY AGENCIES AND ORGANIZATIONS CONTACTED	
Gordon Taylor, Planner Arizona State Land Department	Dr. Henry Schmitt, Superintendent Buckeye Union District #20
Michael Anable, Commissioner Arizona State Land Department	Matt Holm, Senior Planner Planning and Development Department, Maricopa County
Mary Lynn Tischer Transportation Planning Division Arizona Department of Transportation	Tim Oliver Maricopa County Department of Transportation
William Scalzo, Director Maricopa County Parks and Recreation	Bob Woodring Maricopa County Department of Transportation
Cindy Lester, Chief, Arizona Section Regulatory Branch U.S. Army Corps of Engineers	J.C. Courier El Paso Natural Gas Company (El Paso Corporation)
Joy Rich, Director Planning and Development Department, Maricopa County	Michael Reeves El Paso Natural Gas Company (El Paso Corporation)
James P. McFadden, Complex Warden ASPC – Lewis	Ron Serio Phoenix Public Works
Michael Ellegood, Chief Engineer Flood Control District of Maricopa County	Liz Zeller, Planner Town of Buckeye
Ronald Fletcher, Superintendent Arlington Valley Unified School District #24	Christ Dimitroplos, Project Manager Statewide Project Management Arizona Department of Transportation
Dennis Smith, Assistant Director Maricopa Association of Governments	Brad Dugas, Allied Waste Industries Southwest Regional Landfill
Tom Buick, Director Maricopa County Department of Transportation	Allan Dunstan, Tina Heede Desierto Verde Plant Nursery
Ken Travous, Director Arizona State Parks Department	Tom Hildebrandt Arizona Game and Fish Department
Joseph Blanton, Town Manager Town of Buckeye	Jerard Silvani Planning and Development Department Maricopa County

Thirteen responses to the BLM informational letter have been received to date and are summarized below.

INFORMATIONAL LETTER RESPONSES RECEIVED		
Letter/Call Received From	**Date Received**	**Summary of Letter/Call**
William Kendall Arizona Department of Agriculture	06/10/02	Notify department of anticipated destruction of protected native plants in advance. Recommend a plant survey of project site be completed.
Leigh Kuwanwisiwma Hopi Tribe	06/13/02	Accept invitation to initiate consultations.
Terry Worman Pebble Pickin Posse	06/17/02	Don't see impact to recreation or access. Project is needed to meet the growing power needs of Arizona.
Dale Owen Private Citizen	06/18/02	Would proposed line be within existing corridor?
Tim Flood Friends of Arizona Rivers	06/20/02	What opportunities for structures to be made harmless to wildlife? How will crossing of Gila River be constructed to minimize impacts to wildlife and viewshed?
J.B. Jacks Private Citizen	06/21/02	Spend minimum NEPA dollars on line to be located in already approved utility corridor.
Cindy Lester Corps of Engineers	06/21/02	May require Section 404 permit.
James Gross Arizona State Land Department	06/25/02	Please request that GBPP contact State Land Department regarding additional right-of-way needed over State Land.
Roland Tang Arizona Department of Transportation	07/11/02	No comments, but would like to review EA when available.
Angie McIntire Arizona Game and Fish Department	07/11/02	Recommend raptor-safe structures to minimize mortalities to greatest extent possible.
Paul Herndon Arizona Public Service	07/12/02	Existing rights and privileges of APS be recognized and respected.
Bob Woodring Maricopa County Department of Transportation	07/23/02	Widening of State Route 85 in vicinity of project, long-range plan for extension of Riggs Road, site-specific visual analysis of Gillespie Dam Bridge area, future section line road potential.
Robert Kondziolka Salt River Project	07/24/02	Additional planned lines in corridor should provide for safe operation and maintenance of all current and planned utilities located within the designated corridor.
Steven Spangle U.S. Fish and Wildlife Service	07/24/02	Review website for species lists.

The BLM contacted officials of the following tribes:

The Hopi Tribe
Tohono O'odham Nation
Ak-Chin Indian Community
Fort McDowell Mohave - Apache Indian Community
Yavapai - Prescott Tribe
Yavapai - Apache Indian Community, Camp Verde
Gila River Indian Community
Salt River Pima-Maricopa Indian Community

5.2 KEY PREPARERS

Bureau of Land Management

MarLynn Spears	Authorized Officer
Camille Champion	Project Manager
Cheryl Blanchard	Archaeologist
Jim Andersen	Realty Specialist
Jack Ragsdale	Recreation/Visual Resource Advisor
Elroy Masters	Wildlife Biologist

BLM (623) 580-5500

GBPP

Robert Walther	Owner's Engineer

GBPP (707) 528-8900

Environmental Planning Group

Garlyn Bergdale	Principal-in-Charge
Lauren Weinstein	Project Manager
Newton DeBardeleben	Project Coordinator, Land Use/Recreation, Earth and Water Resources
Marc Schwartz	Visual Resources and Simulations
Greg Bernosky	Socioeconomics
Matthew Hill	Cultural Resources
Locana deSouza	Biological Resources
Kristi Holt	Geographic Information Systems

EPG (602) 956-4370

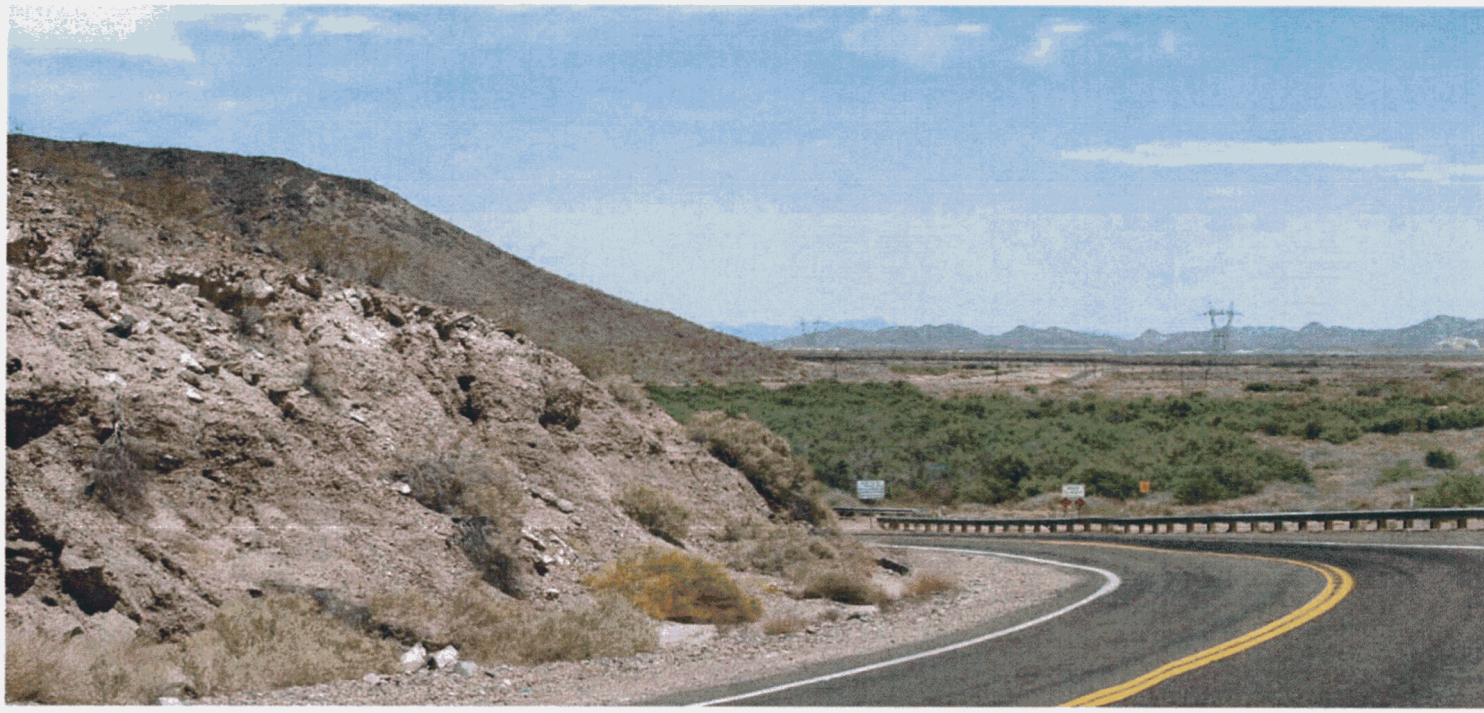
APPENDIX A
STANDARD OPERATING PROCEDURES AND MITIGATION MEASURES

STANDARD OPERATING PROCEDURES AND MITIGATION MEASURES
1. All construction vehicle movement outside of the right-of-way will be restricted to predesignated access, contractor acquired access, or public roads.
2. The limits of construction activities will typically be predetermined, with activity restricted to and confined within those limits. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits. The right-of-way boundary will be flagged in environmentally sensitive areas described in the final plan of development to alert construction personnel that those areas should be avoided.
3. In construction areas where recontouring is not required, vegetation will be left in place wherever possible to avoid excessive root damage and allow for resprouting.
4. In construction areas (e.g., marshalling yards, structure sites, spur roads from existing access roads) where ground disturbance is significant or where recontouring is required, surface restoration will occur as required by the landowner or land-management agency. The method of restoration will typically consist of returning disturbed areas to their natural contour (to the extent practical), reseeding or revegetating with native plants (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches. Seed must be tested and certified to contain no noxious weeds in the mix by the State of Arizona Agricultural Department. Seed viability must also be tested at a certified laboratory approved by the authorized officer.
5. Only the minimum amount of vegetation necessary for the construction of structures and facilities shall be removed. Topsoil will be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation.
6. The holder shall trim trees in preference to cutting trees and shall cut trees in preference to bulldozing them as directed by the authorized officer.
7. Watering facilities (e.g., tanks, developed springs, water lines, wells, etc.) will be repaired or replaced to their predisturbed conditions are required by the landowner or land management agency, if they are damaged or destroyed by construction activities.
8. Prior to construction, all construction personnel will be instructed on the protection of cultural, paleontological, and ecological resources. To assist in this effort, the construction contract will address (a) federal and state laws regarding antiquities, fossils, and plants and wildlife including collection and removal, and (b) the importance of these resources and the purpose and necessity of protecting them.
9. Impact avoidance and mitigation measures for cultural resources developed in consultation with BLM and the State Historic Preservation Officer will be implemented.
10. The project sponsors will respond to complaints of line-generated radio or television interference by investigating the complaints and implementing appropriate mitigation measures. The transmission line will be patrolled on a regular basis so that damaged insulators or other line materials that could cause interference are repaired or replaced.
11. The project sponsors will apply necessary mitigation to minimize problems of induced currents and voltages onto conductive objects sharing a right-of-way, to the mutual satisfaction of the parties involved.
12. All construction and maintenance activities shall be conducted in a manner that will minimize disturbance to vegetation, drainage channels, and intermittent and perennial streambanks. In addition, all existing roads will be left in a condition equal to or better than their condition prior to the construction of the transmission line.
13. Construction holes left open over night shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.
14. During construction, water shall be applied for the purpose of dust control. Following final grading or re-contouring of appropriate areas, these areas will be watered to help protect the top soil from wind erosion.
15. All requirements of those entities having jurisdiction over air quality matters will be adhered to and any necessary permits for construction activities will be obtained. Open burning of construction debris (cleared trees, etc.) will not be allowed in the project area.

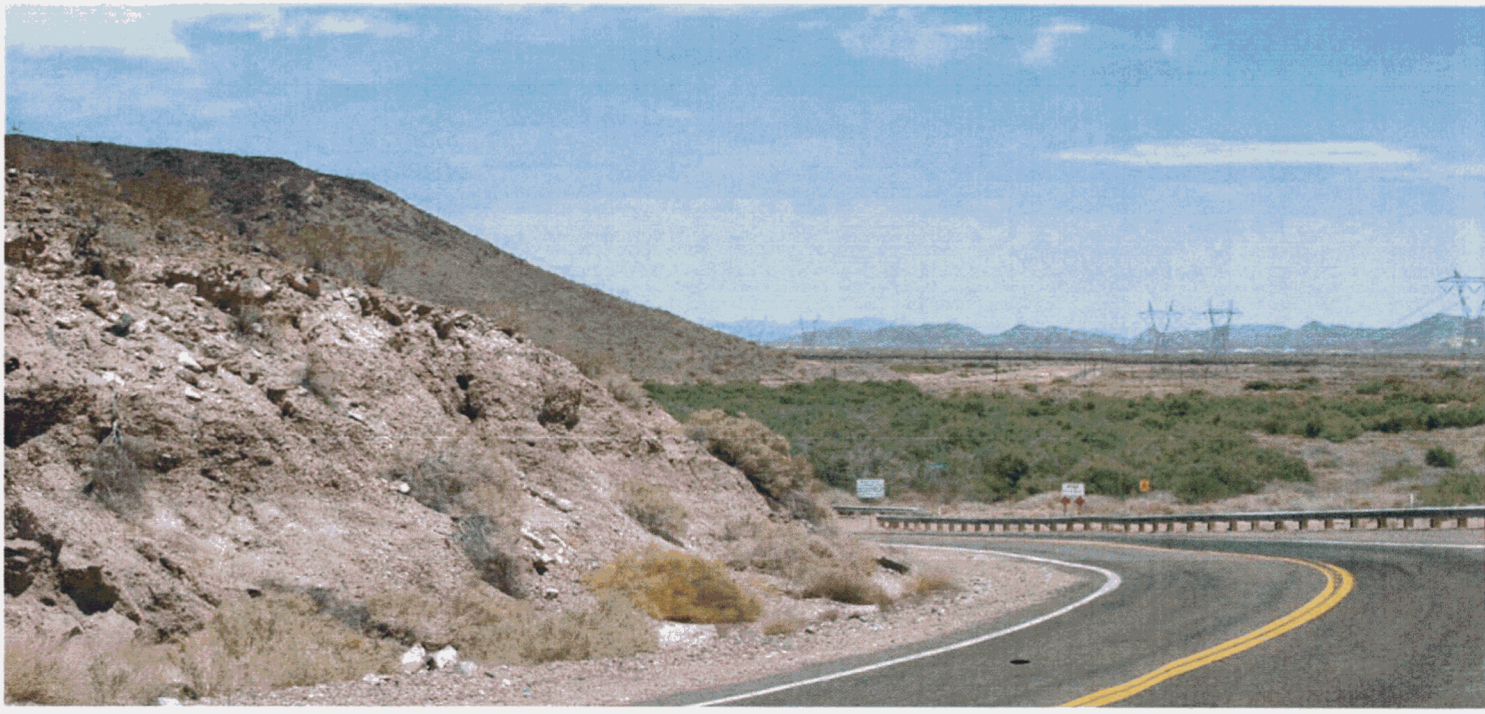
STANDARD OPERATING PROCEDURES AND MITIGATION MEASURES
16. Fences and gates, if damaged or destroyed by construction activities, will be repaired or replaced to their original predisturbed condition as required by the landowner or the land management agency. Temporary gates will be installed only with the permission of the landowner or the land management agency, and will be restored to their original predisturbed condition following construction.
17. The proposed hardware and conductor will limit the audible noise, radio interference (RI), and television interference (TVI) due to corona. Tension will be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution will be exercised during construction to avoid scratching or nicking the conductor surface, which may provide points for corona to occur.
18. During operation of the transmission line, the right-of-way will be maintained free of construction-related non-biodegradable debris.
19. Totally enclosed containment will be provided for all debris. All construction waste including debris, litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials will be removed promptly to a disposal facility authorized to accept such materials.
20. Structures will be constructed to conform to "Suggested Practices for Raptor Protection on Power Lines" (Raptor Research Foundation, Inc. 1981).
21. A salvage plan approved by the BLM for species protected by the Arizona Native Plant Law will be included in the specific plan of development. Generally, salvage may include: ■ removal and stockpiling for replanting on site ■ removal and transplanting out of surface disturbance area ■ removal and salvage by private individuals ■ removal and salvage by commercial dealers ■ any combination of the above
22. The alignment of any new access roads or overland routes will follow the designated area's landform contours where possible, providing that such alignment does not additionally impact resource values. This would minimize ground disturbance and reduce scarring.
23. All new access roads not required for maintenance will be permanently closed using the most effective and least environmentally damaging methods appropriate to that area with concurrence of the landowner or land manager (e.g., stock piling and replacing topsoil, or rock replacement). This would limit access into the area.
24. In designated areas, structures will be placed or rerouted so as to avoid sensitive features such as, but not limited to, riparian areas, watercourses, and cultural sites, or to allow conductors to clearly span the features, within limits of standard tower design.
25. Transmission line structures will comply with Federal Aviation Administration guidelines to minimize aircraft hazards (Federal Aviation 77).
26. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

APPENDIX B
VISUAL RESOURCES

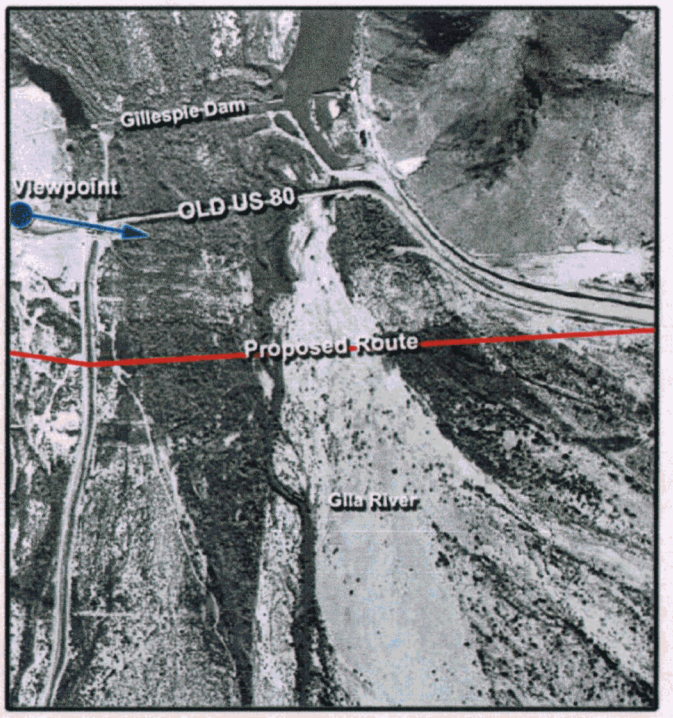
The following pages include three photosimulations prepared as part of the visual resource analysis (Figures B-1 through B-3). Also included are the VRM class guidelines (Table B-1) and a viewpoint location map for Scenic Quality Rating Form (Figure B-4) followed by the Scenic Quality Forms.



Existing Conditions (Single-Circuit 500kV Lattice Tower Transmission Line)



Simulation of 500kV Single-Circuit Lattice Tower Transmission Line



Viewpoint from Old US 80
looking southeast
over the Gila River

SIMULATION DATA

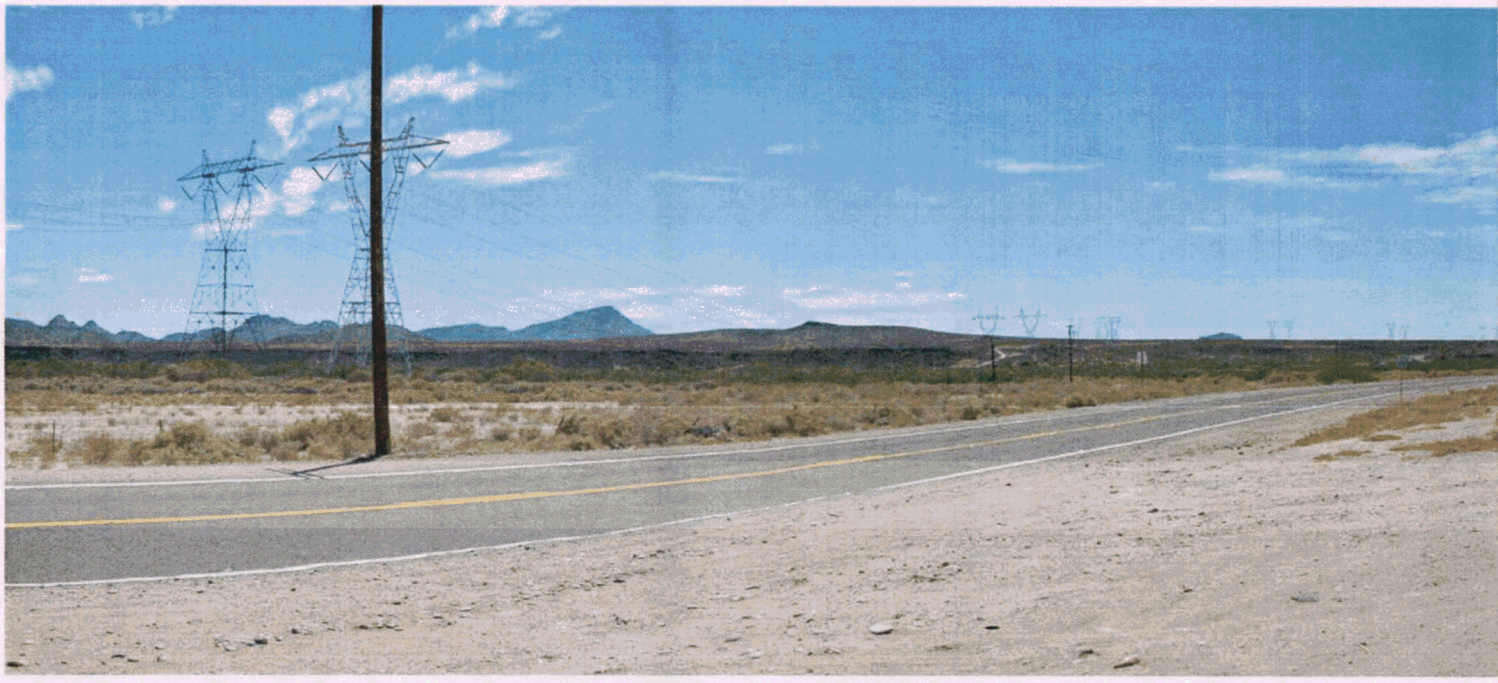
Date: 07-01-2002
Time: 1:00 pm
Weather: Mostly Sunny
Simulated Focal Length: 24.00 mm
Simulated Field of View : 73.73 degrees

HASSAYAMPA TO JOJOBA
500kV TRANSMISSION LINE PROJECT

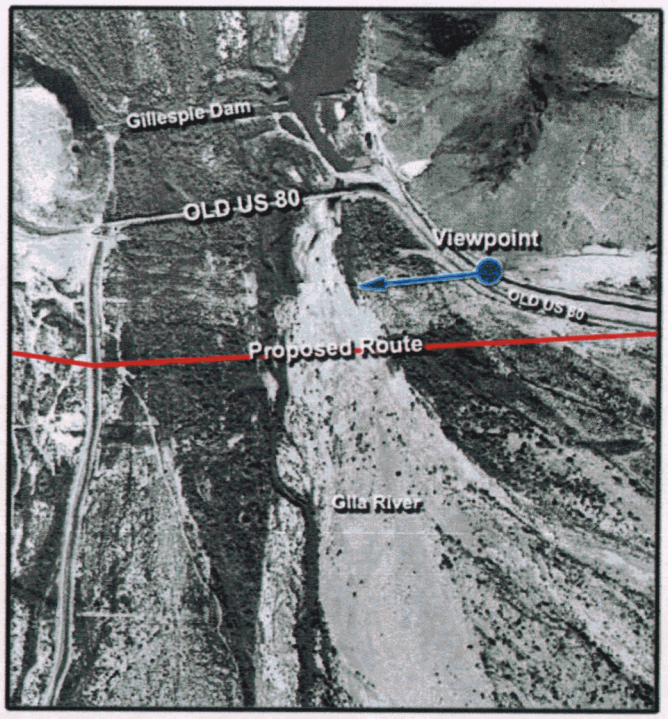
GILA BEND
Power Partners, L.L.C.

FIGURE B-1

Existing Conditions (Single-Circuit 500kV Lattice Tower Transmission Line)



Simulation of 500kV Single-Circuit Lattice Tower Transmission Line



Viewpoint from Old US 80
looking west towards
the Gila River

SIMULATION DATA

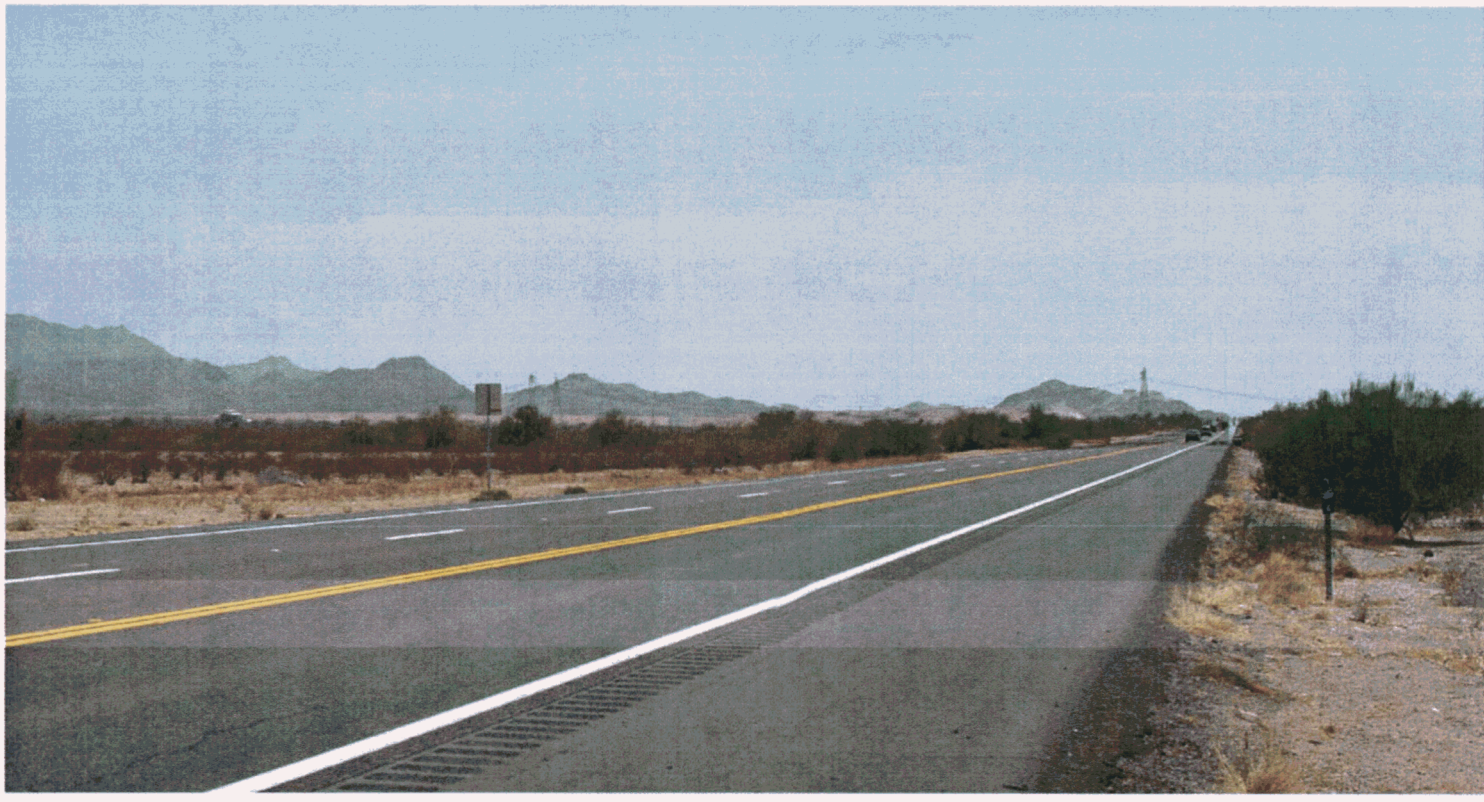
Date: 07-01-2002
Time: 1:36 pm
Weather: Mostly Sunny
Focal Length: 38.00 mm
Simulated Field of View : 84.73 degrees

HASSAYAMPA TO JOJOBA
500kV TRANSMISSION LINE PROJECT

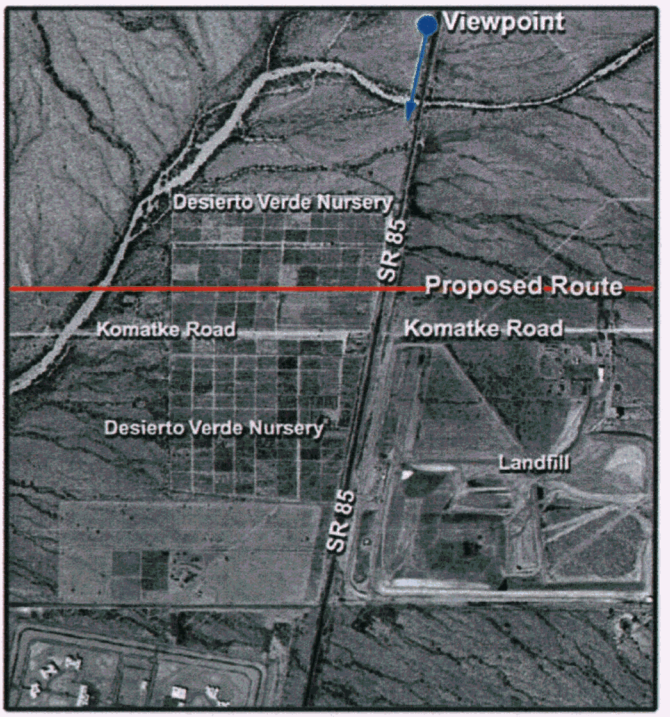
GILA BEND
Power Partners, L.L.C.

FIGURE B-2

Existing Conditions (Single-Circuit 500kV Lattice Tower Transmission Line)



Simulation of 500kV Single-Circuit Lattice Tower Transmission Line



Viewpoint from SR 85
looking south towards
Gila Bend

SIMULATION DATA

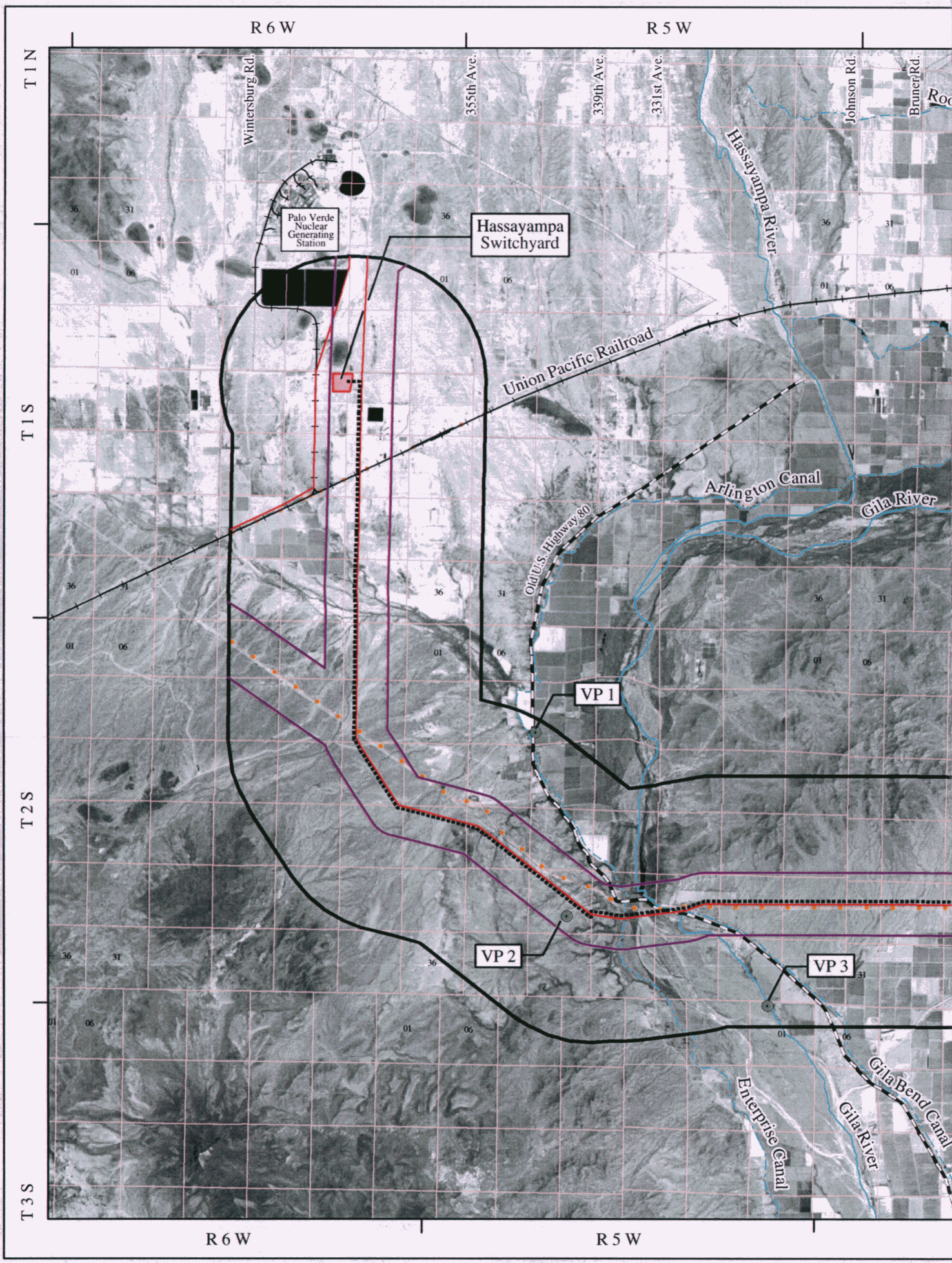
Date: 07-12-2002
Time: 10:30 am
Weather: Clear
Focal Length: 39.00 mm
Simulated Field of View : 83.73 degrees

HASSAYAMPA TO JOJOBA
500kV TRANSMISSION LINE PROJECT

GILA BEND
Power Partners, L.L.C.

FIGURE B-3

TABLE B-1 VISUAL RESOURCES MANAGEMENT CLASSES	
Class I	This class provides primarily for natural ecological changes; however, it does not preclude very limited activity. Any contrast created within the characteristic environment must not attract attention.
Class II	Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape. A contrast may be seen but should not attract attention.
Class III	Contrasts to the basic elements (form, line, color, texture) caused by a management activity may be evident and begin to attract attention in the characteristic landscape. However, the changes should remain subordinate to the existing characteristic landscape.
Class IV	Contrasts may attract attention and be a dominate feature of the landscape in terms of scale; however, the change should repeat the basic elements (form, line, color, texture) inherent in the characteristic landscape.


R 6 W
R 5 W
T 1 N
T 1 S
T 2 S
T 3 S
Wintersburg Rd.
355th Ave.
339th Ave.
331st Ave.
Johnson Rd.
Bruner Rd.
Hassayampa River
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Union Pacific Railroad
Arlington Canal
Gila River
Old U.S. Highway 80
VP 1
VP 2
VP 3
Gila Bend Canal
Enterprise Canal
Gila River

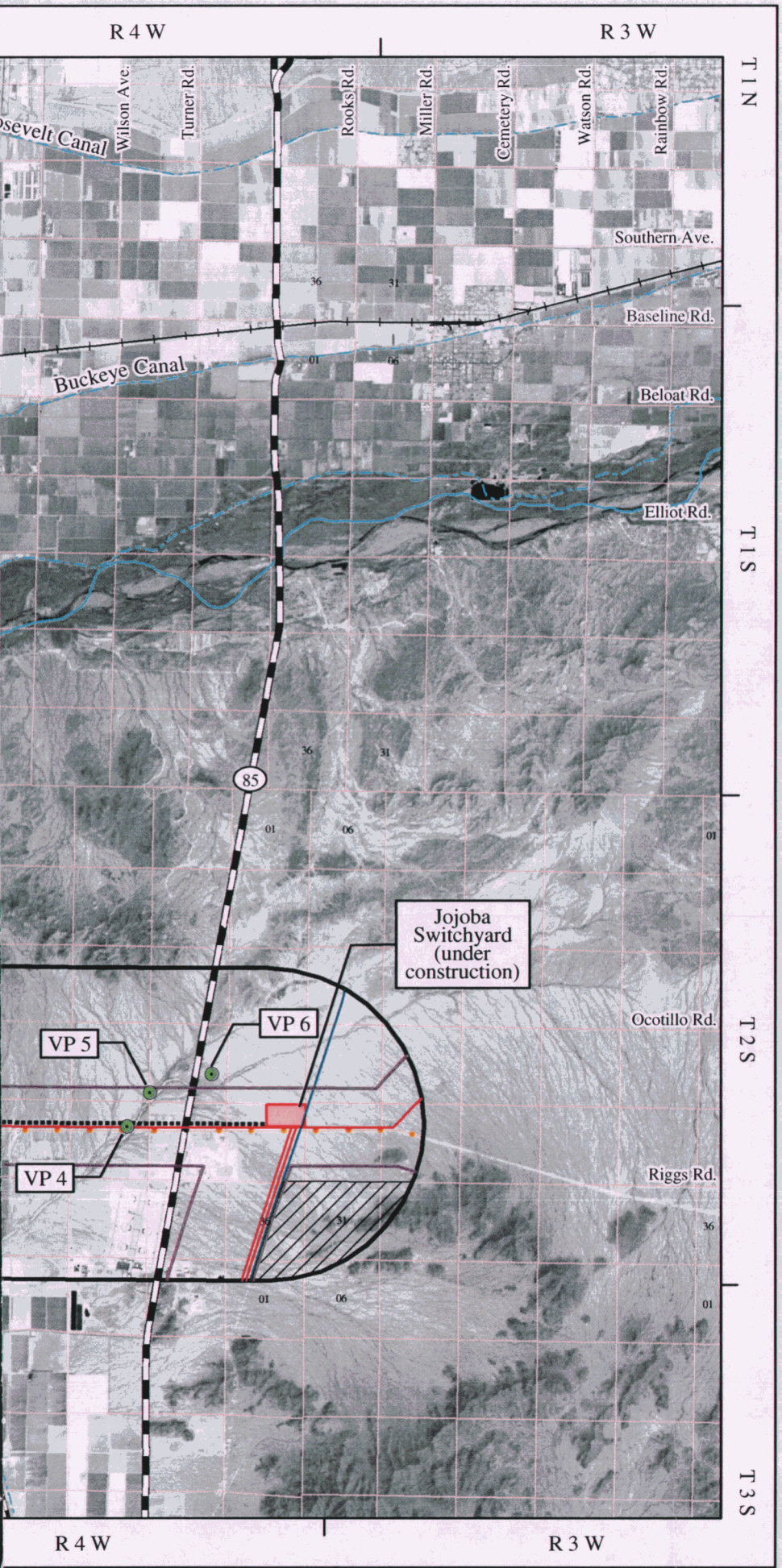


Figure B-4

Viewpoint Location Map for Scenic Quality Forms

Hassayampa to Jojoba
500kV Transmission Line Project

Gila Bend Power Partners, L.L.C.

- Proposed Transmission Line Route
- Viewpoint (VP)

General Reference Features

- Switchyard
- Study Area Boundary
- BLM Designated Utility Corridor
- Sonoran Desert National Monument
- 500kV Transmission Line
- 230kV Transmission Line
- Gas/Oil Pipeline Corridor
- State Route
- Old U.S. Highway 80
- Railroad
- Canal
- River
- Section Line

Sources:

Space Imaging. August, 1999. USGS Landsat Imagery.
May 2002. Arizona State Land Department. 2000. Modified.

N
W E
S

1 0.5 0 1 2 3 Miles

m:/projects/gbpp/hass-jojoba/mxds/figb_4.mxd September 12, 2002

Scenic Quality Rating Form

Hassayampa to Jojoba Transmission Line Project

Scenic Quality Map Number	203
Scenic Quality Class/Rating	B/12
Photograph Location	Vp1

Scenic Quality Classification Rating

Landform	5	4	3	2	**1**
Vegetation	5	4	**3**	2	1
Water	5	4	3	**2**	0
Color	5	4	3	**2**	1
Adjacent Scenery	5	4	3	**2**	1
Scarcity	5	4	3	2	**1**
Cultural Modifications	2	**1**	0	-1	-2

Scenic Quality Classification Legend

A = 19 or more	**B = 12 - 18**	**C = 11 or less**

Narrative Landscape Description

Working agricultural land. This landscape type is best described as picturesque. Although completely altered from its natural state, elements of repetition, rhythm, and contrasts occur throughout the landscape in the form of, respectively, rectilinear patterns (fields), hedge rows, and vegetation type (color). These elements all contribute to this landscape type's overall scenic quality.

Photograph

Scenic Quality Rating Form

Hassayampa to Jojoba Transmission Line Project

Scenic Quality Map Number	201
Scenic Quality Class/Rating	B/14
Photograph Location	Vp2

Scenic Quality Classification Rating

Landform	5	4	3	**2**	1
Vegetation	5	4	**3**	2	1
Water	5	4	3	**2**	0
Color	5	4	**3**	2	1
Adjacent Scenery	5	4	**3**	2	1
Scarcity	5	4	3	**2**	1
Cultural Modifications	2	1	0	**-1**	-2

Scenic Quality Classification Legend

A = 19 or more	**B = 12 - 18**	**C = 11 or less**

Narrative Landscape Description

Volcanic plateau. This basaltic outcropping rises approximately 300 feet above the surrounding Sonoran Desert, forming the western edge of the Arlington Valley (Gila River). Strewn across this edge are petroglyphs contributing to the scenic quality. Furthermore, the topology of the plateau allows xeroriparian stringers to radiate out for the highpoint, creating contrast in both vegetation and geology in a rhythmic fashion for this landscape type.

Photograph

Scenic Quality Rating Form

Hassayampa to Jojoba Transmission Line Project

Scenic Quality Map Number	301
Scenic Quality Class/Rating	C/11
Photograph Location	Vp3

Scenic Quality Classification Rating

Landform	5	4	3	**2**	1
Vegetation	5	4	3	**2**	1
Water	5	4	3	2	**1**
Color	5	4	3	**2**	1
Adjacent Scenery	5	4	3	**2**	1
Scarcity	5	4	3	**2**	1
Cultural Modifications	2	1	**0**	-1	-2

Scenic Quality Classification Legend

A = 19 or more	**B = 12 - 18**	**C = 11 or less**

Narrative Landscape Description

Gila Riverbed. This landscape type consists of an open flat valley flanked by agricultural lands and mountains on each side. The landscape is rich with line and form created by the edges of the aforementioned elements. The vegetation within the valley is predominantly annual grasses, giving this landscape type a soft serene quality.

Photograph

Scenic Quality Rating Form

Hassayampa to Jojoba 500kV Transmission Line Project

Scenic Quality Map Number	304
Scenic Quality Class/Rating	C/4
Photograph Location	Vp4

Scenic Quality Classification Rating

Landform	5	4	3	2	1
Vegetation	5	4	3	2	1
Water	5	4	3	2	0
Color	5	4	3	2	1
Adjacent Scenery	5	4	3	2	1
Scarcity	5	4	3	2	1
Cultural Modifications	2	1	0	-1	-2

Scenic Quality Classification Legend

A = 19 or more	**B = 12 - 18**	**C = 11 or less**

Narrative Landscape Description

Fallow agriculture. This landscape type occurs throughout the study area in small patches. Due to the lack of human stewardship invasive plants tend to colonize the areas homogenizing the site. The elements of line, color, and texture tend to be absent giving these landscapes low scenic quality.

Photograph

Scenic Quality Rating Form

Hassayampa to Jojoba Transmission Line Project

Scenic Quality Map Number	202
Scenic Quality Class/Rating	B / 13
Photograph Location	Vp5

Scenic Quality Classification Rating

Landform	5	4	3	**2**	1
Vegetation	5	4	**3**	2	1
Water	5	4	3	**2**	1
Color	5	4	3	**2**	1
Adjacent Scenery	5	4	3	**2**	1
Scarcity	5	4	3	**2**	1
Cultural Modifications	2	1	0	**-1**	-2

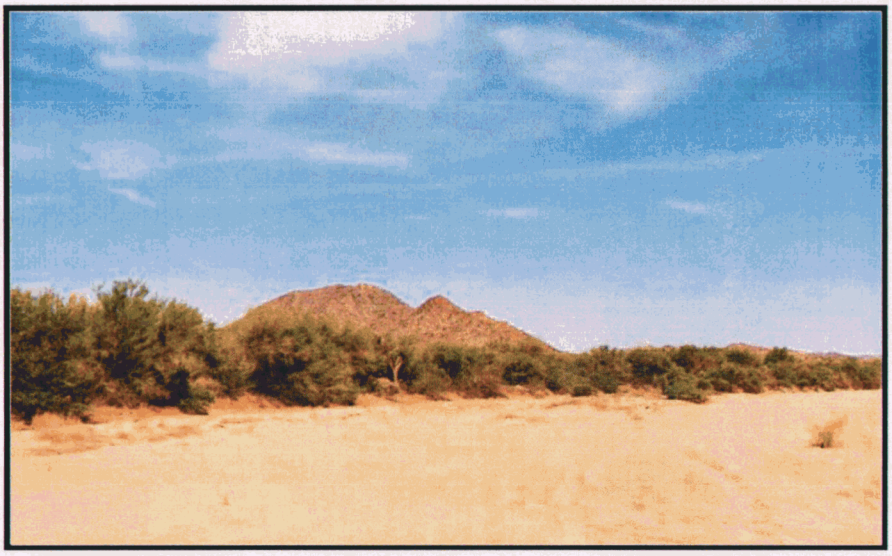
Scenic Quality Classification Legend

A = 19 or more	**B = 12 - 18**	**C = 11 or less**

Narrative Landscape Description

Major desert wash. Heavy sand deposits compose the base of this wash. The dense mesquite and palo verde trees that define the edge of the wash provide a contrasting color to the sand and a soft texture to the unmodified edge. Off road vehicles have created heavy disturbance in the sandy bottom of the wash.

Photograph



Scenic Quality Rating Form

Hassayampa to Jojoba Transmission Line Project

Scenic Quality Map Number	302
Scenic Quality Class/Rating	C/10
Photograph Location	Vp6

Scenic Quality Classification Rating

Landform	5	4	3	**2**	1
Vegetation	5	4	3	**2**	1
Water	5	4	3	2	**1**
Color	5	4	3	**2**	1
Adjacent Scenery	5	4	3	**2**	1
Scarcity	5	4	3	2	**1**
Cultural Modifications	2	1	**0**	-1	-2

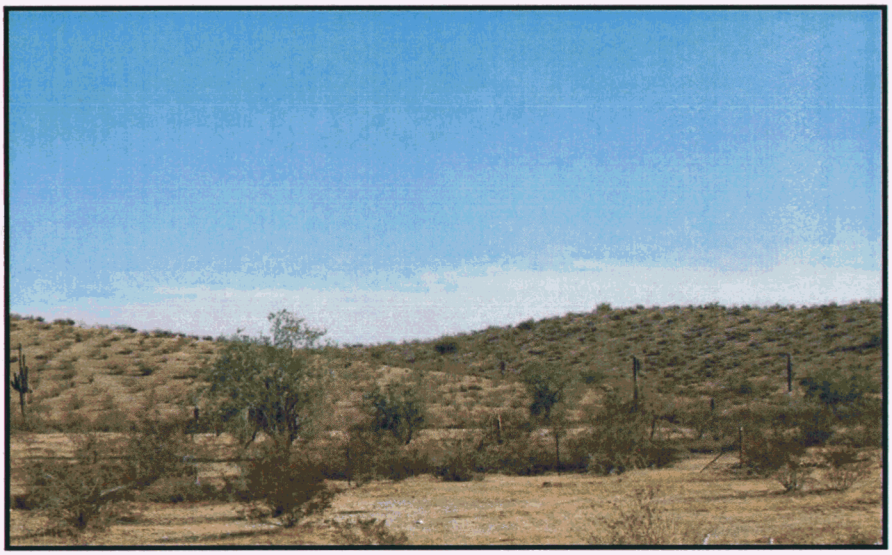
Scenic Quality Classification Legend

A = 19 or more	**B = 12 - 18**	**C = 11 or less**

Narrative Landscape Description

Lower Sonoran Desert hills. This landscape type is similar to the Lower Sonoran landscape type in both color and texture. The primary feature that differentiates this landscape type from the latter is the occurrence of hills. Visually these hills add a softness with the element of line added to the landscape that increases its overall scenic quality.

Photograph



APPENDIX C
BIOLOGICAL RESOURCES

Included in this appendix are lists of the various species that may occur in the vicinity of the proposed project.

TABLE C-1 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Common loon	*Gavia immer*	Lakes, ponds, and aqueducts
Pied-billed grebe	*Podilymbus podiceps*	Lakes, ponds, streams, and canals
Eared grebe	*Podiceps nigricollis*	Lakes and ponds
Western grebe	*Aechmophorus occidentalis*	Lakes, ponds, and lagoons
Double-crested cormorant	*Phalacrocorax auritus*	Lakes, ponds, streams, and aqueducts
Western least bittern	*Ixobrychus exilis hesperis*	Marshy areas of emergent vegetation
Great blue heron	*Ardea herodias*	Lakes, ponds, streams, canals, and marshes
Great egret	*Ardea alba*	Ponds, streams, and marshes
Snowy egret	*Egretta thula*	Ponds, streams, and marshes
Green heron	*Butorides virescens*	Lakes, ponds, streams, marshes, and canals
Black-crowned night heron	*Nycticorax nycticorax*	Lakes, ponds, marshes, and streams
White-faced ibis	*Plegadis chihi*	Lakes, ponds, streams, marshes, and fields
Canada goose	*Branta canadensis*	Lakes, ponds, and fields
Gadwall	*Anas strepera*	Lakes, ponds, and streams
American wigeon	*Anas americana*	Lakes, ponds, and streams
Mallard	*Anas platyrhynchos*	Lakes, ponds, streams, and canals
Blue-winged teal	*Anas discors*	Ponds
Cinnamon teal	*Anas cyanoptera*	Ponds, streams, and canals
Northern shoveler	*Anas clypeata*	Lakes, ponds, and streams
Northern pintail	*Anas acuta*	Lakes, ponds, and streams
Green-winged teal	*Anas crecca*	Lakes, ponds, and streams
Redhead	*Aythya americana*	Lakes and ponds
Ring-necked duck	*Aythya collaris*	Lakes and ponds
Lesser scaup	*Aythya affinis*	Lakes and ponds
Bufflehead	*Bucephala albeola*	Lakes, ponds, and streams
Ruddy duck	*Oxyura jamaicensis*	Lakes and ponds
Turkey vulture	*Cathartes aura*	Open country, woodlands, farms
Osprey	*Pandion haliaetus*	Lakes and streams
Bald eagle	*Haliaeetus leucocephalus*	Lakes and rivers
Northern harrier	*Circus cyaneus*	Wetlands, open fields
Sharp-shinned hawk	*Accipiter striatus*	Generally distributed
Cooper's hawk	*Accipiter cooperii*	Broken woodlands or streamside groves
Harris's hawk	*Parabuteo unicinctus*	Semiarid woodland, brushland
Swainson's hawk	*Buteo swainsoni*	Fields and desert
Red-tailed hawk	*Buteo jamaicensis*	Plains, prairie groves, desert
Ferruginous hawk	*Buteo regalis*	Dry, open country
American kestrel	*Falco sparverius*	Open country, cities
Prairie falcon	*Falco mexicanus*	Dry, open country, prairies
Peregrine falcon	*Falco peregrinus*	Cliffs, generally distributed, tops of tall urban buildings
Gambel's quail	*Callipepla gambelii*	Desert scrublands and thickets
Yuma clapper rail	*Rallus longirostris yumanensis*	Cattail marshes
Common moorhen	*Gallinula chloropus*	Streams, marshes, and ponds

TABLE C-1 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
American coot	*Fulica americana*	Lakes, ponds, streams, and marshes
Killdeer	*Charadrius vociferus*	Ponds, streams, and fields
Greater yellowlegs	*Tringa melanoleuca*	Lakes, ponds, streams, and flooded fields
Spotted sandpiper	*Actitis macularia*	Lakes, ponds, streams, and canals
Western sandpiper	*Calidris mauri*	Ponds and streams
Least sandpiper	*Calidris minutilla*	Ponds and streams
Long-billed dowitcher	*Limnodromus scolopaceus*	Ponds and streams
Common snipe	*Gallinago gallinago*	Ponds, marshes, streams, and wet fields
Wilson's phalarope	*Phalaropus tricolor*	Lakes and ponds
Ring-billed gull	*Larus delawarensis*	Lakes, ponds, and streams
Rock dove	*Columba livia*	Parks, fields, urban settings
White-winged dove	*Zenaida asiatica*	Dense mesquite, mature citrus groves, riparian woodlands, saguaro-paloverde deserts
Mourning dove	*Zenaida macroura*	Wide variety of habitats
Inca dove	*Columbina inca*	Near human habitations
Common ground dove	*Columbina passerina*	Fields and hedgerows
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Riparian areas
Greater roadrunner	*Geococcyx californianus*	Scrub desert and mesquite groves, less common in chaparral and oak woodland
Barn owl	*Tyto alba*	Dark cavities in city and farm buildings, cliffs, trees
Western screech owl	*Otus kennicottii*	Open woodlands, streamside groves, deserts, suburban areas
Great horned owl	*Bubo virginianus*	Common in wide variety of habitats
Cactus ferruginous pygmy-owl	*Glaucidium brasilianum cactorum*	Saguaro deserts, woodlands
Elf owl	*Micrathene whitneyi*	Desert lowlands, canyons, foothills
Burrowing owl	*Athene cunicularia*	Open country, golf courses, airports
Lesser nighthawk	*Chordeiles acutipennis*	Dry, open country, scrubland, desert
Common poorwill	*Phalaenoptilus nuttallii*	Sagebrush and chaparral slopes
White-throated swift	*Aeronautes saxatalis*	Mountains, canyons, and cliffs
Black-chinned hummingbird	*Archilochus alexandri*	Lowlands and low mountains
Anna's hummingbird	*Calypte anna*	Coastal lowlands, mountains, deserts
Costa's hummingbird	*Calypte costae*	Desert washes, dry chaparral
Rufous hummingbird	*Selasphorus rufus*	Suburban and riparian areas
Belted kingfisher	*Ceryle alcyon*	Rivers and brooks, ponds and lakes, estuaries
Gila woodpecker	*Melanerpes uropygialis*	Towns, scrub desert, cactus country, streamside woods
Ladder-backed woodpecker	*Picoides scalaris*	Dry brushlands, mesquite and cactus country, towns and rural areas
Northern flicker	*Colaptes auratus*	Open woodlands, suburban areas
Gilded flicker	*Colaptes chrysoides*	Low desert woodlands, favors saguaro
Western wood-pewee	*Contopus sordidulus*	Riparian areas, wooded habitats, including suburban areas
Southwestern willow flycatcher	*Empidonax traillii extimus*	Brushy habitats in wet areas
Pacific-slope flycatcher	*Empidonax difficilis*	Migrant through lowlands

TABLE C-1 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Black phoebe	*Sayornis nigricans*	Woodlands, parks, suburbs, prefers to nest near water
Say's phoebe	*Sayornis saya*	Dry, open areas, canyons, cliffs
Vermilion flycatcher	*Pyrocephalus rubinus*	Streamside shrubs, bottomlands, near small wooded ponds
Ash-throated flycatcher	*Myiarchus cinerascens*	Wide variety of habitats
Brown-crested flycatcher	*Myiarchus tyrannulus*	Saguaro desert, river groves, lower mountain woodlands
Western kingbird	*Tyrannus verticalis*	Dry, open country
Cassin's kingbird	*Tyrannus vociferans*	Varied habitats
Common raven	*Corvus corax*	Mountains, deserts, coastal areas
Bell's vireo	*Vireo bellii*	Riparian areas, especially in mesquite trees
Warbling vireo	*Vireo gilvus*	Deciduous woods
Horned lark	*Eremophila alpestris*	Dirt fields, gravel ridges, shores
Tree swallow	*Tachycineta bicolor*	Streams, ponds, and lakes
Violet-green swallow	*Tachycineata thalassina*	Riparian areas, streams, ponds, and lakes
Northern rough-winged swallow	*Stelgidopteryx serripennis*	Banks of streams and canals, streams, ponds, and lakes
Cliff swallow	*Petrochelidon pyrrhonota*	Lakeside, cliffs, and canals; nesting under nearby bridges, buildings, and other overhangs; streams and ponds
Barn swallow	*Hirundo rustica*	Streams, ponds, lakes, and agricultural areas
Verdin	*Auriparus flaviceps*	Southwestern desert
Cactus wren	*Campylorhynchus brunneicapillus*	Cholla cactus habitat
Rock wren	*Salpinctes obsoletus*	Arid and semiarid habitats
Canyon wren	*Catherpes mexicanus*	Canyons and cliffs, often near water
Bewick's wren	*Thryomanes bewickii*	Wooded riparian areas
House wren	*Troglodytes aedon*	Dense, brushy areas
Ruby-crowned kinglet	*Regulus calendula*	Woodlands, thickets
Black-tailed gnatcatcher	*Polioptila melanura*	Desert, especially washes
Western bluebird	*Sialia mexicana*	Woodlands, farmlands, orchards, deserts, especially in mesquite-mistletoe groves
American robin	*Turdus migratorius*	Generally distributed
Northern mockingbird	*Mimus polyglottos*	Variety of habitats
Bendire's thrasher	*Toxostoma bendirei*	Open farmlands, grasslands, brushy desert
Curve-billed thrasher	*Toxostoma curvirostre*	Cholla deserts and suburban areas
Crissal thrasher	*Toxostoma crissale*	Riparian areas and washes
American pipit	*Anthus rubescens*	Fields, ponds, pastures, riparian areas
Cedar waxwing	*Bombycilla cedrorum*	Riparian and suburban areas
Phainopepla	*Phainopepla nitens*	Riparian areas, especially in trees with mistletoe
Loggerhead shrike	*Lanius ludovicianus*	Generally distributed
European starling	*Sturnus vulgaris*	Generally distributed
Orange-crowned warbler	*Vermivora celata*	Riparian and suburban areas in lowlands
Lucy's warbler	*Vermivora luciae*	Mesquites and cottonwoods along watercourses
Yellow warbler	*Dendroica petechia*	Wet habitats, open woodlands, gardens, orchards
Yellow-rumped warbler	*Dendroica coronata*	Riparian and suburban areas

TABLE C-1 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Townsend's warbler	*Dendroica townsendi*	Lowland riparian and suburban areas
Common yellowthroat	*Geothlypis trichas*	Marshes and suburban areas
Wilson's warbler	*Wilsonia pusilla*	Dense, moist woodlands, bogs, streamside tangles
Yellow-breasted chat	*Icteria virens*	Dense thickets and brush
Summer tanager	*Piranga rubra*	Riparian areas
Western tanager	*Piranga ludoviciana*	Transient in lowlands
Green-tailed towhee	*Pipilo chlorurus*	Brushy areas, riparian, and suburban areas
Spotted towhee	*Pipilo maculatus*	Brushy areas, riparian and suburban areas
Canyon towhee	*Pipilo fuscus*	Sonoran desertscrub
Abert's towhee	*Pipilo aberti*	Riparian areas, suburban areas
Chipping sparrow	*Spizella pallida*	Brushy edges and riparian areas
Brewer's sparrow	*Spizella breweri*	Deserts, field edges, and suburban areas
Black-chinned sparrow	*Spizella atrogularis*	Rocky hillsides in Sonoran desertscrub
Vesper sparrow	*Pooecetes gramineus*	Open weedy fields, roadsides, and grassy areas
Lark sparrow	*Chondestes grammacus*	Brushy, weedy areas, riparian areas, and field edges
Black-throated sparrow	*Amphispiza bilineata*	Desert scrub
Lark bunting	*Calamospiza melanocorys*	Brushy desert and field edges
Savannah sparrow	*Passerculus sandwichensis*	Open fields, roadsides, and grassy areas
Song sparrow	*Melospiza melodia*	Riparian areas, marshes, and vegetated lakesides
Lincoln's sparrow	*Melospiza lincolnii*	Riparian areas, marshes, brushy fields, and hedgerows
White-crowned sparrow	*Zonotrichia leucophrys*	Suburban, riparian, and other brushy areas
Dark-eyed junco	*Junco hyemalis*	Desertscrub
Black-headed grosbeak	*Pheucticus melanocephalus*	Transient in lowlands
Northern cardinal	*Cardinalis cardinalis*	Woodland edges, swamps, streamside thickets, suburban gardens
Pyrrhuloxia	*Cardinalis sinuatus*	Thorny brush, mesquite thickets, desert, woodland edges, ranchlands
Blue grosbeak	*Guiraca caerulea*	Riparian areas
Lazuli bunting	*Passerina amoena*	Weedy and shrubby areas along irrigation ditches and other bodies of water and suburban areas
Red-winged blackbird	*Agelaius phoeniceus*	Riparian areas, irrigated fields, marshes, and feedlots
Western meadowlark	*Sturnella neglecta*	Fields and other open areas, deserts
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	Marshes, fields, feedlots
Brewer's blackbird	*Euphagus cyanocephalus*	Fields, farmyards, feedlots, ponds, and riparian areas
Great-tailed grackle	*Quiscalus mexicanus*	Riparian areas, marshes, ponds, farmyards, and suburban areas
Bronzed cowbird	*Molothrus aeneus*	Riparian and suburban areas
Brown-headed cowbird	*Molothrus ater*	Suburbs and agricultural areas
Hooded oriole	*Icterus cucullatus*	Riparian and suburban areas
Bullock's oriole	*Icterus bullockii*	Riparian areas
House finch	*Carpodacus mexicanus*	Riparian and suburban areas, farmland, desert

TABLE C-1 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Lesser goldfinch	*Carduelis psaltria*	Riparian areas
House sparrow	*Passer domesticus*	Associated with human presence
Sources: National Geographic Society 1999, Witzeman, et. al 1997		

TABLE C-2 MAMMAL SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Desert shrew	*Notiosorex crawfordi*	Any area w/ample ground cover including plant debris, trash and lumber
California leaf-nosed bat	*Macrotus californicus*	Sonoran desertscrub with caves and mines
Lesser long-nosed bat	*Leptonycteris cursoae yerbabuenae*	Desertscrub with agave and columnar cacti present as food plants
Yuma myotis	*Myotis yumanensis*	Areas with rivers, ponds, canals, or other permanent water
Cave myotis	*Myotis velifer*	Desertscrub with caves, mines, or bridges and water nearby
California myotis	*Myotis californicus*	Desertscrub with rock faces containing crevices, occasionally caves and mines
Western pipistrelle	*Pipistrellus hesperus*	Areas with canyon walls or cliff faces for roosting, streambeds and tanks for foraging
Big brown bat	*Eptesicus fuscus*	Wooded areas, desertscrub
Southern yellow bat	*Lasiurus ega*	Areas with large trees, especially fan palms (*Washingtonia*)
Spotted bat	*Euderma maculatum*	Uneven rocky cliffs near a riparian area
Townsend's big-eared bat	*Plecotus townsendii*	Areas with caves or mines, structures for night roosts
Pallid bat	*Antrozous pallidus*	Desertscrub with caves, mine, cliffs, bridges or other structures for roosts
Brazilian free-tailed bat	*Tadarida brasiliensis*	Desertscrub and foothills with mines, caves, bridges or old buildings
Pocketed free-tailed bat	*Tadarida femorosacca*	Rocky cliffs and slopes, structures
Big free-tailed bat	*Tadarida macrotis*	Rocky cliffs with crevices
Western mastiff bat	*Eumops perotis*	Rocky cliffs with crevices or shallow caves
Desert cottontail	*Sylvilagus audubonii*	Desertscrub, semi-desert grassland
Black-tailed jack rabbit	*Lepus californicus*	Desertscrub and other areas with open ground cover
Harris' antelope squirrel	*Ammospermophilus harrisii*	Rocky areas of creosote bush/saltbush/bursage
Rock squirrel	*Spermophilus variegatus*	Rocky areas above 1,600 feet
Round-tailed ground squirrel	*Spermophilus tereticaudus*	Creosote bush/saltbush desert with sandy or gravelly soil
Botta's pocket gopher	*Thomomys bottae*	Any area with soil suitable for digging burrows
Little pocket mouse	*Perognathus longimembris*	Sandy or gravelly soils in broken or rolling country
Arizona pocket mouse	*Perognathus amplus*	Desertscrub
Rock pocket mouse	*Chaetodipus intermedius*	Rocky areas of desertscrub
Desert pocket mouse	*Chaetodipus penicillatus*	Sandy areas of desertscrub with sparse vegetation
Bailey's pocket mouse	*Chaetodipus baileyi*	Flats and lower slope areas of desertscrub

TABLE C-2 MAMMAL SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Merriam's kangaroo rat	*Dipodomys merriami*	Sandy areas of desertscrub
Desert kangaroo rat	*Dipodomys deserti*	Areas with deep sandy soil
Plains harvest mouse	*Reithrodontomys montanus*	Desertscrub or chaparral
Western harvest mouse	*Reithrodontomys megalotis*	Desertscrub or chaparral
Cactus mouse	*Peromyscus eremicus*	Desertscrub, rocky areas, chaparral
Deer mouse	*Peromyscus maniculatus*	Coniferous or riparian woodland, desertscrub adjacent to canals or intermittent creeks
Southern grasshopper mouse	*Onychomys torridus*	Desertscrub or semi-desert grassland with compact soil
Arizona cotton rat	*Sigmodon arizonae*	Mesquite scrub and weedy areas along canals and washes
White-throated wood rat	*Neotoma albigula*	Areas below the conifer belt, especially with *Opuntia*, or paloverde
Desert wood rat	*Neotoma lepida*	Desertscrub
Muskrat	*Ondatra zibethicus*	Irrigation canals associated with the Gila River
House mouse	*Mus musculus*	Weedy areas and cultivated fields, usually near human habitation
Coyote	*Canis latrans*	Cosmopolitan, from spruce forest to low desert
Kit fox	*Vulpes macrotis*	Desertscrub and desert grassland with sandy or softer clay soils
Gray fox	*Urocyon cineroargenteus*	Open desertscrub, chaparral, lower elevation woodland
Raccoon	*Procyon lotor*	Areas with permanent water
Coati	*Nasua narica*	Canyons with a mixture of oaks and pines, shrubby woodland, or grassland and shrubs, may move through desert areas
Ringtail	*Bassariscus astutus*	Steep rocky areas near water
Badger	*Taxidea taxus*	Flats and drainages adjacent to mountains, grasslands
Western spotted skunk	*Spilogale gracilis*	Low and middle elevations, often in rocky areas or around human habitation
Striped skunk	*Mephitis mephitis*	From spruce/fir belt to sea level, usually near permanent water
Mountain lion	*Puma concolor*	Rocky or mountainous areas, especially with many deer
Bobcat	*Felis rufus*	Rocky upland areas interspersed w/ open desert, grassland or woodland
Collared peccary	*Tayassu tajacu*	Desertscrub, especially in thickets along creeks and old stream beds
Mule deer	*Odocoileus hemionus*	Pine forest, oak woodland, chaparral, upland desert
Source: Hoffmeister 1986		

TABLE C-3 REPTILE AND AMPHIBIAN SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Sonoran desert toad	*Bufo alvarius*	Ranges from arid mesquite-creosote bush lowlands and arid grasslands into the oak-sycamore-walnut groves in mountain canyons, often found near permanent water of springs, reservoirs, canals, and streams, but also frequents temporary pools
Great plains toad	*Bufo cognatus*	Inhabits prairies or deserts, often breeding after heavy rains in summer in shallow temporary pools or quiet water of streams, marshes, irrigation ditches, and flooded fields, frequents creosote bush desert, mesquite woodland, and sagebrush plains
Red-spotted toad	*Bufo punctatus*	Desert streams and oases, open grassland and scrubland, oak woodland, rocky canyons and arroyos, in crevices among rocks for shelter, breeds in rain pools, reservoirs, and temporary pools of intermittent streams
Southwestern woodhouse toad	*Bufo woodhousei australis*	Grassland, sagebrush flats, woods, desert streams, valleys, floodplains, farms, and city backyards, in sandy areas, breed in quiet water of streams, marshes, lakes, freshwater pools, and irrigation ditches
Canyon treefrog	*Hyla arenicolor*	Huddles in niches on sides of boulders or stream banks, favors intermittent or permanent streams with quiet pools that have a hard rocky bottom, frequents arroyos in semi-arid grassland, streams in piñon-juniper and pine-oak woodlands, and tropical scrub forest
Couch spadefoot	*Scaphiopus couchii*	Frequents shortgrass plains, mesquite savannah, creosote bush desert, thornforest, tropical deciduous forest, and other areas of low rainfall
Southern spadefoot	*Spea multiplicata*	Frequents desert grassland, shortgrass plains, creosote bush and sagebrush desert, mixed grassland and chaparral, piñon-juniper and pine-oak woodlands, and open pine forests, soil is often sandy or gravelly
Bullfrog	*Rana catesbeiana*	Highly aquatic, remaining in or near permanent water, frequents prairie, woodland, chaparral, forests, desert oases, and farmland, enters marshes, ponds, lakes, reservoirs, and streams – usually quiet water with thick growth of cattails or other aquatic vegetation
Lowland leopard frog	*Rana yavapaiensis*	Frequents desert, grassland, oak and oak-pine woodland, in permanent pools of foothill streams, overflow ponds and side channels of major rivers, permanent springs, and in drier areas – more or less permanent stock tanks
Sonoran mud turtle	*Kinosternon sonoriense*	Stream-dwelling turtle that frequents springs, creeks, ponds, and the water holes of intermittent streams, inhabits woodlands, or oaks and piñon –juniper or forests of ponderosa pine and Douglas fir, also occasionally inhabits foothill grasslands and desert
Sonoran desert tortoise	*Gopherus agassizii*	Completely terrestrial desert species requiring firm but not hard ground for construction of burrows, frequent desert oases, riverbanks, washes, and rocky slopes
Spiny softshell	*Trionyx spiniferus*	River turtle attracted to quiet water with bottom of mud, sand, or gravel, also enters ponds, canals, and irrigation ditches
Eastern collared lizard	*Crotaphytus collaris*	Rock-dwelling lizard that frequents canyons, rocky gullies, limestone ledges, mountain slopes, and boulder-strewn alluvial fans, usually where vegetation is sparse

TABLE C-3
REPTILE AND AMPHIBIAN SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT

Common Name	Scientific Name	Habitat
Long-nosed leopard lizard	*Gambelia wislizenii wislizenii*	Arid and semiarid plains grown to bunch grass, alkali bush, sagebrush, creosote bush, or other scattered low plants, ground may be hardpan, gravel, or sand
Western banded gecko	*Coleonyx variegatus*	Variety of habitats, often associated with rocks
Gila monster	*Heloderma suspectum*	Canyon bottoms and washes in desert or desert grassland
Desert iguana	*Dipsosaurus dorsalis*	Creosote bush desert to subtropical scrub, most common in sandy habitats but also occurs along rocky streambeds, on bajadas, silty floodplains, and on clay soils
Common chuckwalla	*Sauromalus obesus*	Rock-dwelling, herbivorous lizard, widely distributed in the desert
Zebra-tailed lizard	*Callisaurus draconoides*	Frequents washes, desert pavements of small rocks, and hardpan
Desert horned lizard	*Phrynosoma platyrhinos*	Arid lands on sandy flats, alluvial fans, along washes, and at the edges of dunes, associated with creosote bush, saltbush, greasewood, cactus, and ocotillo in the desert
Regal horned lizard	*Phrynosoma solare*	Frequents rocky and gravelly habitats of the arid and semiarid plains, hills, and lower slopes of mountains, often with cactus, mesquite, and creosote bush
Desert spiny lizard	*Sceloporus magister*	Arid and semiarid regions on plains and lower slopes of mountains, found in Joshua-tree, creosote bush, and shad-scale deserts, mesquite-yucca grassland, juniper and mesquite woodland, subtropical thornscrub, and along rivers grown to willows and cottonwoods
Brush lizard	*Urosaurus graciosus*	Desert species, frequents areas of loose sand and scattered bushes and trees, creosote bush, burrobush, galleta grass, catclaw, mesquite, and paloverde
Tree lizard	*Urosaurus ornatus*	Frequents mesquite, oak, pine, juniper, alder, cottonwood, and non-native trees such as tamarisk and rough-bark eucalyptus, but also may occur in treeless areas, especially attracted to river courses
Side-blotched lizard	*Uta stansburiana*	Arid or semiarid regions with sand, rock, hardpan, or loam with grass, shrubs, and scattered trees, often found along sandy washes
Western whiptail	*Cnemidophorus tigris*	Inhabits deserts and semiarid habitats, usually where plants are sparse, also found in woodland, streamside growth, and in the warmer, drier parts of forests
Banded sand snake	*Chilomeniscus cinctus*	Loose soils in low desert or upland
Rosy boa	*Charina trivirgata*	Rocky shrublands and desert, particularly near water source
Western glossy snake	*Arizona occidentalis*	Below 6,000 feet in sparsely vegetated woodland, chaparral, grassland or desertscrub with loose soil
Western shovel-nosed snake	*Chionactis occipitalis*	Sparsely vegetated desert areas w/ pockets of loose soil
Night snake	*Hypsiglena torquata*	Various upland and desert habitats used
Coachwhip	*Masticophis flagellum*	Sparsely vegetated areas from juniper woodland to low desert
Saddled leaf-nosed snake	*Phyllorhynchus browni*	Desertscrub

TABLE C-3 REPTILE AND AMPHIBIAN SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Spotted leaf-nosed snake	*Phyllorhynchus descurtatus*	Open desert with finer loose soils, especially creosote bush (*Larrea tridentata*)
Gopher snake	*Pituophis catenifer*	Various habitats from mountain to low desert and coastal
Long-nosed snake	*Rhinocheilus lecontei*	Desertscrub, prairie, tropical woodland to 5,500 feet
Western patch-nosed snake	*Salvadora hexalepis*	Piñon – juniper woodland to low deserts on variety of soil types
Glossy snake	*Arizona elegans*	Sandy or loamy open areas – light shrubby to barren desert, sagebrush flats, grassland, chaparral-covered slopes, and woodland
Common kingsnake	*Lampropeltis getulus*	Woodland, swampland, coastal marshes, river bottoms, farmland, prairie, chaparral, and desert.
Ground snake	*Sonora semiannulata*	Wide range of habitats in loose soil with some subsurface moisture
Southwestern black-headed snake	*Tantilla hobartsmithi*	In loose soil or plant litter in desert grassland and wood land habitats
Black-necked garter snake	*Thamnophis cyrtopsis*	Pine-fir forest to upland desert and chaparral, generally in the vicinity of a water source
Checkered garter snake	*Thamnophis marcianus*	Low elevation rivers, streams, ponds, and canals, and adjacent areas
Lyre snake	*Trimorphodon biscutatus*	From oak and juniper woodland to higher elevation desert and grasslands, particularly in rocky areas
Western coral snake	*Micruroides euryxanthus*	Wide range of arid habitats including grassland, woodland, scrub and agricultural lands, particularly upland desert in washes and river bottoms
Western blind snake	*Leptotyphlops humilis*	Desertscrub and brush covered hillsides with loose soils
Western diamondback rattlesnake	*Crotalus atrox*	Wide range of habitats below 7,000 feet
Sidewinder	*Crotalus cerastes*	Desert areas with fine loose sand, often near small shrubs
Southwestern speckled rattlesnake	*Crotalus mitchellii*	From juniper woodland to succulent desert, often in rocky areas
Black-tailed rattlesnake	*Crotalus molossus*	Upland desert to pine-oak woodland
Mojave rattlesnake	*Crotalus scutulatus*	Mostly in upland desert and lower mountain slopes
Tiger rattlesnake	*Crotalus tigris*	Rocky desert canyons and foothills
Source: Prival 1999; Stebbins 1985		

TABLE C-4 FISH SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Threadfin shad	*Dorosoma petenense*	Lakes, ponds, larger rivers, estuaries, canals, and reservoirs; often in moderate current, frequently congregating below swift riffles, in circular eddies, or in open flowing pools
Carp	*Cyprinus carpio*	Streams, natural lakes, and manmade impoundments, over all types of bottoms and in clear or turbid waters
Longfin dace	*Agosia chrysogaster*	Found in shallow runs over sand bottom and in eddys and shallow pools near overhanging banks or other cover, typically in moderate current, rarely in backwaters or deep pools
Red shiner	*Notropis lutrensis*	Wide variety of low gradient habitats, especially in backwaters, creek mouths and medium-sized streams with sand/silt bottoms
Fathead minnow	*Pimephales promelas*	Wide range of habitats from ponds to flowing streams
Channel catfish	*Ictalurus pounctatus*	Clear, medium to large rivers with swift currents over sand or gravel-rocky bottoms, may enter brackish waters
Black bullhead	*Ictalurus melas*	Ponds, pools of all sizes in streams and rivers, and in swampy habitats
Mosquitofish	*Gambusia affinis*	Vegetated ponds, lakes, drainage ditches, and backwaters and oxbows of sluggish streams; often in brackish or marine situations
Sailfin molly	*Poecilia latipinna*	Springs, lakes and ponds, rivers and streams, drainage ditches, and salt marshes
Largemouth bass	*Micropterus salmoides*	Clear, quiet waters with aquatic vegetation
Green sunfish	*Lepomis cyanellus*	Varied habitats, usually near cover such as brushy banks, cliffs, or piles of rubble; not normally in brackish water
Bluegill	*Lepomis macrochirus*	Shallow warm lakes, ponds, and slow-flowing rivers and creeks often with abundant aquatic vegetation
Black crappie	*Pomoxis nigromaculatus*	Quiet warm waters, usually associated with abundant aquatic vegetation and sandy to muddy bottoms in large ponds and shallow areas of lakes
Mozambique mouthbrooder	*Tilapia mossambica*	Slow or still, weedy waters; in canals and backwaters
Source: Lee et. al 1980; Minckley 1973		

APPENDIX D
PUBLIC CONTACT INFORMATION

In preparation of the EA and as part of the public information program for the Hassayampa to Jojoba Transmission Project, an informational letter was prepared and sent to 375 addresses on the BLM mailing list, grazing allottees, and landowners crossed by the proposed project. A copy of the letter can be found in this appendix.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Phoenix Field Office
21605 North 7th Avenue
Phoenix, AZ 85027

IN REPLY REFER TO:
2800 (020)
AZA-31468

June 3, 2002

Request for Comments for the Proposed Right-of-Way for the Gila Bend Power Partners - Hassayampa to Jojoba Transmission Project, Maricopa County, Arizona

INTRODUCTION

The Bureau of Land Management (BLM) requests your comments relating to the proposed right-of-way (R/W) on public lands for the Gila Bend Power Partners (GBPP) - Hassayampa to Jojoba Transmission Project located in Maricopa County, Arizona (see enclosed project map).

The purpose of this mailer is to notify potentially interested parties including local, state, and federal agencies and adjacent land owners of the proposed project. All comments must be received by July 12, 2002, and will be reviewed as part of the environmental analysis for the project. At this time, the BLM has decided to prepare an Environmental Assessment (EA) to determine whether or not the project will have significant environmental effects. The EA is expected to be available for public comment late this summer or early next fall.

PROPOSED ACTION

The Proposed Action involves one 500 kV power line on steel lattice structures which would be constructed within a R/W that is approximately 200 feet wide and 20 miles in length, including approximately 7 miles of BLM administered land. The proposed R/W, as it affects public land, would be built entirely within the PVNGS - Kyrene utility corridor as identified in the Lower Gila South Resource Management Plan (1988). The proposed action requires environmental compliance subject to the National Environmental Policy Act (NEPA).

The R/W of the proposed action would directly impact up to approximately 163 acres of public lands.

DECISION TO BE MADE

The decision to implement the Proposed Action involves the BLM, which has jurisdiction for approximately 163 acres of public lands involved in the project.

Implementation of the Proposed Action will depend on the following: 1) BLM Field Manager reviews the EA, including comments received, and documents the decision in

a Decision Record that contains a Finding of No Significant Impact (FONSI); or 2) makes the decision to prepare an Environmental Impact Statement (EIS).

ISSUES

At a minimum, the EA will discuss the existing conditions of each resource and environmental consequences of the alternative(s) on the following issues:

- Biological Resources (plants, wildlife, threatened and endangered species, and livestock grazing)
- Cultural Resources (archaeological sites)
- Land Use (recreation, access, R/W, etc.)
- Socioeconomics
- Physical Resources (waters of the U.S., ground/surface water use, air quality, etc.)

NEPA PROCESS

- 30-day public comment period
- Preparation of EA
- Decision Record issued
- Public Protest & Appeal Period

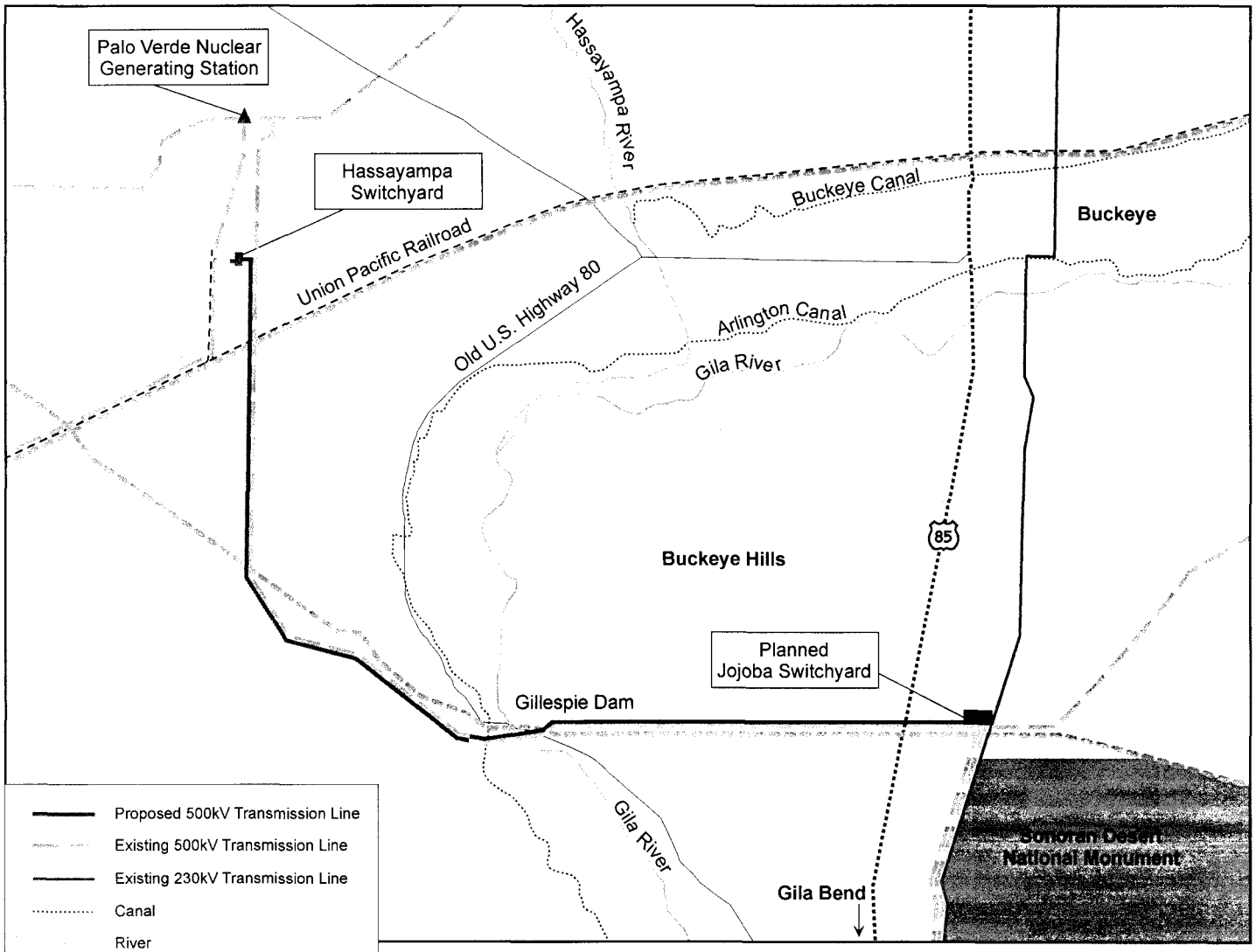
If you have any questions, please contact Camille Champion at (623) 580-5526.

Sincerely,

Rick Cooper
Acting Field Manager

Enclosure
Project Map

CCHAMPION:kal:05/23/02:Info ltr



*schematic drawing - not to scale

Proposed Hassayampa to Jojoba 500kV Transmission Line Project

Environmental Assessment

Gila Bend Power Partners, LLC

June 2002

EXHIBIT
A-4
admitted

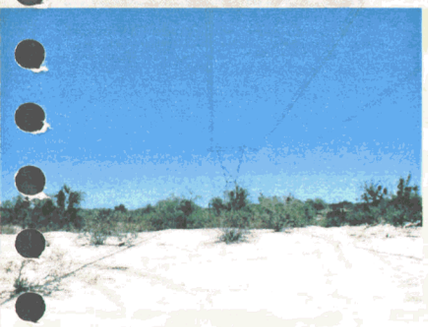
CASE #119
FEBRUARY 19, 2003

HEARING ON AN

Application for a Certificate of Environmental Compatibility

HASSAYAMPA TO JOJOBA
500kV TRANSMISSION LINE PROJECT

VOLUME II




PREPARED FOR
Arizona Corporation Commission

Arizona Power Plant and
Transmission Line Siting Committee

SUBMITTED BY
Gila Bend Power Partners, LLC

environmental planning group, inc.
INTERDISCIPLINARY PLANNING, DESIGN AND PERMITTING

4350 East Camelback Road, Suite G-200
Phoenix, AZ 85018
Tel: 602-956-4370 Fax: 602-956-4374

TRANSMITTAL FORM

Date: February 11, 2003
Your Order No.:
EPG Job No.: 1177

To: Arizona Power Plant and Transmission Line Siting Committee

Intervenors:
Arizona Corporation Commission staff – legal counsel, David Ronald
Salt River Project – legal counsel, Ken Sundloff and Rob Taylor of Jennings, Strouss & Salmon

Subject: Hassayampa to Jojoba 500kV Transmission Line Project Hearing Exhibits Volume II

We are sending you via overnight mail **the following:**

Enclosed for your review is a document containing several of the exhibits to be used in the second hearing scheduled for February 19, 2003 in Phoenix including:

- Hearing Exhibits
- Environmental Assessment, Decision Record, and Finding of No Significance

No. of copies submitted: one to each

Copies to:

Tom Campbell, Lewis & Roca
GBPP, L.L.C.

EPG, Inc.
By: Lauren Weinstein

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BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

In the matter of the Application of Gila Bend Power Partners, L.L.C. and its assignees in conformance with the requirements of Arizona Revised Statutes Sections 40-360.03 and 40-360.06 for a certificate of environmental compatibility authorizing construction of one 500 kV transmission line and associated switch-yard components in Maricopa County, Arizona originating at the Hassayampa Switchyard near the Palo Verde Nuclear Generating Station west of Phoenix, Arizona (Section 15, Township 1 south, Range 6 West) and terminating at the Jojoba Switchyard, (Section 25, Township 2 South, Range 4 West), a distance of approximately 20 miles.	Case No: _____ Decision No: _____

DECISION OF THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE AND CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY

Pursuant to the notice given as provided by law, the Arizona Power Plant and Transmission Line Siting Committee ("Committee") held a public hearing at the Gila Bend Town Hall, 644 West Pima Street, Gila Bend, Arizona on October 1, 2002, and a public hearing at the Embassy Suites, 1515 N 44th Street, Phoenix, Arizona on February 19, 2003, in conformance with the requirements of Arizona Revised Statutes §40-360 et seq., for the purpose of receiving evidence and deliberating upon the Application of Gila Bend Power Partners, L.L.C. and its assigns ("Applicant") for a Certificate of Environmental Compatibility in the above-captioned case.

The following members and designees of members of the Committee were present for the evidentiary presentation during the hearings and deliberations and voted on the Application:

Laurie A. Woodall	Chair, Designee for Arizona Attorney General, Terry Goddard
Ray Williamson	Arizona Corporation Commission
Richard Tobin	Arizona Department of Environmental Quality
Mark McWhirter	Department of Commerce
Jeff McGuire	Appointed Member
Mike Palmer	Appointed Member
Margaret Trujillo	Appointed Member
A. Wayne Smith	Appointed Member
Sandie Smith	Appointed Member
Mike Whalen	Appointed Member

The Applicant was represented by Thomas H. Campbell of Lewis and Roca LLP. Staff of the Arizona Corporation Commission ("Commission") was represented by its counsel, David Ronald. SRP intervened on behalf of the participants in the Southeast Valley project and as operating agent for Palo Verde Transmission System and was represented by Robert Taylor of Jennings, Strouss & Salmon PLC. There were no other intervenors.

Testimony was presented on the conclusion reached in the Central Arizona Transmission Study that over the foreseeable future three transmission lines will be

necessary in the Palo Verde to Kyrene Corridor ("Corridor"). Additional testimony was presented establishing that the construction of transmission lines in the Corridor is complicated by geographical features near Gillespie Dam and its proximity to the Sonoran Desert National Monument necessitating the proper sequencing and spacing of transmission lines within the Corridor.

At the conclusion of the public hearings, after consideration of (i) the Application and the evidence presented during the public hearings, and (ii) the legal requirements of Arizona Revised Statutes §§40-360 and 40-360.13 and A.A.C. R14-3-213, upon motion duly made and seconded, the Committee voted to grant Applicant the following Certificate of Environmental Compatibility.

Applicant is hereby granted a Certificate of Environmental Compatibility for authority to construct the following facilities, as requested in the Application: a 500kV transmission line and associated switchyard components (the "Project").

Applicant's 500kV transmission line will originate at the Hassayampa Switchyard near the Palo Verde Nuclear Generating Station west of Phoenix, Arizona, (Section 15, Township 1 South, Range 6 West) and terminate at the Jojoba Switchyard in Section 25, Township 2 South, Range 4 West. The 500kV transmission line alignment will parallel and be adjacent to the existing Palo Verde-Kyrene 500kV transmission line. (*See* Exhibit A) The transmission line will consist of steel lattice structures designed and constructed to accommodate a 500kV circuit. The routing, design, height and material composition of

the 500kV transmission line facilities were testified to by Applicant's witness Robert Walther at the October 1, 2002 hearing.

The 500kV line will complete the interconnection of Applicant's Gila Bend power plant with the Hassayampa Switchyard. The complete interconnection will include the two 500kV transmission lines certificated by the Committee in Case No. 102, the 500kV transmission line and Watermelon switchyard certificated in Case No. 109 and the line proposed in this Application. The details of these interconnections will be the subject of contractual arrangements to be entered into between Applicant and transmission providers.

This Certificate of Environmental Compatibility is granted upon the following conditions:

1. This authorization to construct the aforementioned facilities shall expire **[five (5) years from the date this Certificate of Environmental Compatibility is approved by the Commission]** or **[on April 12, 2006]**, unless construction is completed to the point that the 500kV transmission line is capable of operating by that time; provided, however, that prior to such expiration Applicant may request that the Commission extend this time limitation.

2. Applicant shall provide the Commission with copies of any transmission agreements it ultimately enters into with transmission providers within 30 days of execution of those agreements.

3. The Applicant shall match structure spans with the existing Palo Verde-Kyrene line for the proposed Project unless site-specific conditions require a structure to be moved.

4. The Applicant shall use dulled steel structures and non-specular and dulled conductors to reduce the contrast and visibility of the proposed Project.

5. The Applicant shall match existing structure type to reduce overall Project contrast.

6. Applicant and its assigns shall participate in good faith in state and regional transmission study forums and shall make every reasonable effort to ensure that such transmission line will be timely constructed in accordance with the needs of the integrated transmission grid.

7. To address concerns raised in testimony about the sequencing and spacing of lines within the Corridor, the Applicant shall locate the Gila Bend Power Partners Transmission Line in accordance with the attached legal description (the "Alignment"). If, when the Applicant begins construction, another line is constructed or is under construction in the Alignment, then the Applicant shall locate the Gila Bend Power Partners Transmission Line 130 feet west and south of the transmission line in the Alignment.

8. Applicant shall comply with all existing applicable air and water pollution control standards and regulations, and with all existing applicable ordinances, master plans and regulations of the State of Arizona, the County of Maricopa, the United States and any other governmental entities having jurisdiction.

9. Before construction of this Project may commence, the Applicant shall file a construction mitigation, revegetation and restoration plan with the Commission Docket Control. Applicant shall, within one year of completion of the Project, rehabilitate to its original state any area disturbed by construction of the Project, except for any road that may be necessary to access the transmission lines for maintenance and repair.

10. Survey for southwestern willow flycatchers should be conducted prior to construction, and mitigation measures should be implemented according to state and federal guidelines to minimize potential disturbances to special status species and habitat. If necessary, additional cactus ferruginous pygmy-owl surveys should be conducted in the appropriate season prior to construction.

11. The Applicant shall conduct all construction and maintenance activities in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent and perennial streambanks. For example, the Applicant shall remove only the minimum amount of vegetation necessary for the construction of structures and facilities. In construction areas where recontouring is not required, vegetation shall be left in place to avoid excessive root damage and allow for resprouting. In addition, all existing roads shall be left in a condition equal to or better than their condition prior to the construction of the transmission line.

12. The Applicant shall construct structures to conform to "Suggested Practices for Raptor Protection on Power Lines" (Raptor Research Foundation, Inc. 1981).

13. The Applicant shall retain a qualified biologist, as needed, to monitor ground clearing/disturbing construction activities in areas where sensitive species occur. The biological monitor will be responsible for ensuring proper actions are taken if a special status species is encountered.

14. The Applicant shall comply with Arizona's Native Plant Law and notify the Arizona Department of Agriculture no later than 60 days prior to the start of construction.

15. The Applicant shall continue to consult with the State Historic Preservation Office (SHPO) to reach a determination of any cultural resource impacts. The Applicant shall implement any impact avoidance and mitigation measures (e.g., monitoring during construction) for cultural resources developed in consultation with the BLM and the SHPO on land under BLM's jurisdiction and with ASLD on land under ASLD's jurisdiction.

16. The Applicant shall avoid or minimize impacts to properties considered eligible for inclusion in the State and National Register of Historic Places to the extent practicable. If human remains and /or funerary objects are encountered during the course of any ground disturbing activities relating to the development of the subject property, the Applicant shall cease work on the affected area of the Project and notify the Director of the Arizona State Museum in accordance with A.R.S. Section 47-1685 or the BLM in accordance with the Native American Graves and Protection and Repatriation Act, depending on land ownership.

17. In consultation with SHPO and any applicable land-managing agency, the Applicant shall consider and assess potential direct and indirect impacts to eligible properties related to new access roads or any existing access roads that require blading. An example of an indirect impact would be a road that leads directly to an archaeological site that in effect invites intentional or unintentional vandalism, such as looting or off-road vehicle use, in such case, adding a locked gate or otherwise blocking the road would be an appropriate treatment.

18. The Applicant shall use existing access roads along the Palo Verde-Kyrene line for construction and maintenance access and only build spur roads for access to new structures.

19. The Applicant shall restrict all construction vehicle movement outside of the right-of-way to predesignated access, contractor acquired access or public roads.

20. The Applicant shall restore the ground surface in construction areas (e.g., marshalling yards, structure sites) where ground disturbance is significant or where recontouring is required. The method of restoration may include returning disturbed areas to their natural contour (to the extent practical), reseeding with native plants, installing cross drains for erosion control, placing water bars in the road, and filling ditches. Seed must be tested and certified to contain no noxious weeds in the mix. Seed viability must also be tested at a certified laboratory approved by the authorized officer.

21. The Applicant shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of the line and related facilities, in addition to any transmission repairs, the relevant corrective actions may include adjusting or modifying receivers; adjusting, repairing, replacing or adding antennas, antenna signal amplifiers, filters, or lead-in cables; or other corrective actions.

22. The Applicant shall maintain written records for a period of five (5) years of all complaints of radio or television interference attributable to operation of the Project, together with the corrective action taken in response to each complaint. Complaints not leading to a specific action or for which there was no resolution shall be noted and explained. The record shall be signed by the Project owner and also the complainant, if possible, to indicate concurrence with the corrective action or agreement with the justification for a lack of action.

23. The Applicant shall advise interested parties how they may express concerns or submit complaints to the owner-operator of the Project when they believe the transmission line or switchyard facilities herein authorized are creating noise in excess of applicable Housing and Urban Development standards or causing interference with communications signals in excess of applicable Federal Communication Commission standards. Such complaints may, at the election of the complainant, be processed by owner-operator of the Project.

24. Prior to construction, the contractor shall be instructed on the protection of cultural and ecological resources. To assist in this effort, the construction contract shall address federal and state laws regarding antiquities and plants and wildlife including collection and removal.

25. The Applicant shall cover construction holes left open at night. The covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into any hole.

26. The Applicant shall survey any areas not previously surveyed (e.g., new spur roads) prior to construction.

27. Within 45 days of securing easement of right-of-way for the Project, the Applicant shall erect and maintain signs providing public notice that the property is the site of a future transmission line. Such signage shall be no smaller than a normal roadway sign. The Applicant shall place signs in prominent locations at reasonable intervals such that the public is notified along the full length of the transmission line. Copies of the Certificate shall be provided by the Applicant to city and county planning agencies. The signs shall advise:

    a) That the site has been approved for the construction of a 500kV transmission line;

    b) The expected date of completion of the Project facilities; and

    c) A phone number for public information regarding the Project.

28. In order to ensure transmission system safety and reliability, all transmission structures shall be placed a minimum of 100 feet from the edge of existing natural gas pipelines rights-of-way.

GRANTED this ___ day of February, 2003.

Arizona Power Plant and Transmission Line Siting Committee

By: _____
Laurie A. Woodall, Chair

ORDER OF ARIZONA CORPORATION COMMISSION AFFIRMING AND APPROVING CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY

Having considered the foregoing decision of the Arizona Power Plant and Transmission Line Siting Committee ("Committee") in light of the decision-making factors specified in Arizona Revised Statutes §40-360.06, and, pursuant to Arizona Revised Statutes §40-360.07(c), having balanced in the broad public interest the need for an adequate, economical and reliable supply of electric power with the desire to minimize the effect thereof on the environment and ecology of Arizona, it is the decision of this Commission that the Certificate of Environmental Compatibility granted by the Committee on _____, 2003 in Case No. ____ should be, and hereby is, affirmed and approved.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION

_____	_____	_____
Chairman	Commissioner	Commissioner
_____	_____	
Commissioner	Commissioner	

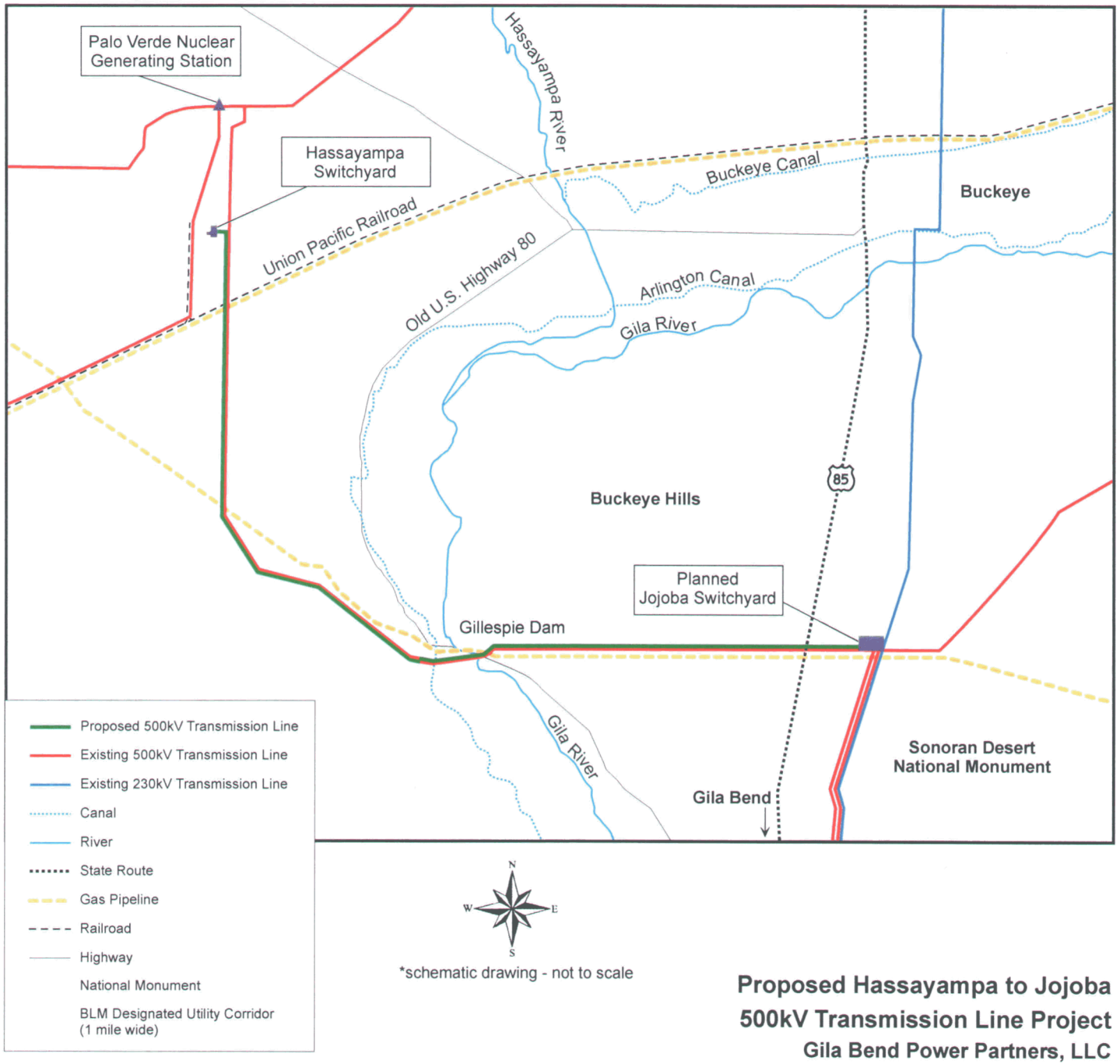
IN WITNESS WHEREOF, I, BRIAN C. MCNEIL Executive Secretary of the Arizona Corporation Commission, have hereunto, wet my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this ___ day of _____, 2003.

_____
Brian C. McNeil
Executive Secretary

Dissent: _____

Description of the Proposed Hassayampa to Jojoba 500kV Transmission Line Route

The proposed 500kV transmission line would originate west of Phoenix, Arizona, at the Hassayampa Switchyard located in Section 15, Township 1 South, Range 6 West near the PVNGS. The proposed route would follow the west and south side of the existing PVNGS–Kyrene 500kV line to a point south of the Gillespie Dam, between Sections 28 and 29, Township 2 South, Range 5 West. At this point the proposed route will cross to the north of the existing PVNGS–Kyrene 500kV line and parallel the transmission line and the El Paso Corporation pipeline corridor east, crossing Old U.S. Highway 80 and State Route 85 to the Jojoba Switchyard in Section 25, Township 2 South, Range 4 West.



*schematic drawing - not to scale

Proposed Hassayampa to Jojoba 500kV Transmission Line Project

Gila Bend Power Partners, LLC

October 2002

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In reply, please refer to
SHPO-2002-1210 (13454)
general comments

December 11, 2002

Laurie A. Woodall, Chairperson,
Power Plant and Transmission Line Siting Committee
Assistant Attorney General, Environmental Enforcement Section,
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

RE: Proposed Hassayampa-Jojoba 500kV Transmission Line, Maricopa County, Arizona

Dear Ms. Woodall:

Thank you for having the committee's applicant (i.e., Gila Bend Power Partners, L.L.C.) initiate consultation with this office regarding the above-mentioned state plan and associated certificate of environmental compatibility. I reviewed the documents submitted and offer the following comments pursuant to the State Historic Preservation Act (i.e., A.R.S. § 41-861 to 41-864) and the committee's factors to be considered (i.e., A.R.S. § 40-360.06.A.5).

The revised survey report addresses my earlier comments and is acceptable for inclusion in the state inventory.

We appreciate the committee's cooperation with this office in considering the effects of state plans on cultural resources situated in Arizona. If you have any questions, please contact me at (602) 542-7137 or via mbilsbarrow@pr.state.az.us.

Sincerely,

Matthew H. Bilsbarrow, RPA
Compliance Specialist/ Archaeologist
Arizona State Historic Preservation Office

cc. Matthew Hill; Environmental Planning Group; 1430 E Fort Lowell Ave; Tucson, AZ 85719

Arizona State Parks
1300 W. Washington
Phoenix, AZ 85007

Tel & TTY: 602.542.4174
www.azstateparks.com

800.285.3703 from
(520 & 928) area codes

General Fax:
602.542.4180

Director's Office Fax:
602.542.4188

In reply, please refer to
SHPO-2002-1210 (12578)
more information requested

October 11, 2002

FAXED 10/11/02 TO MIKE ERA

Laurie A. Woodall, Chairperson,
Power Plant and Transmission Line Siting Committee
Assistant Attorney General, Environmental Enforcement Section,
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

RE: Proposed Hassayampa-Jojoba 500kV Transmission Line, Maricopa County, Arizona

Dear Ms. Woodall:

Thank you for having the committee's applicant (i.e., Gila Bend Power Partners, L.L.C.) initiate consultation with this office regarding the above-mentioned state plan and associated certificate of environmental compatibility. The proposed plan entails the construction of 20 miles of overhead utility lines and access roads as needed. The proposed route originates from the Hassayampa Switchyard south of Wintersburg, and terminates at the Jojoba substation, which is under construction, in the Little Rainbow Valley, and crosses private, Arizona State Land Department (ASLD), Arizona Department of Transportation (ADOT), and U.S. Bureau of Land Management (BLM) lands. Historian Bill Collins and I reviewed the documents submitted and offer the following comments pursuant to the State Historic Preservation Act (i.e., A.R.S. § 41-861 to 41-864) and the committee's factors to be considered (i.e., A.R.S. § 40-360.06.A.5).

This plan also represents a federal undertaking, and BLM will consult directly with this office in regards to the National Historic Preservation Act. Our advice to the committee should not be interpreted or construed to infringe upon role of the lead federal agency regarding the scope and adequacy of identification efforts, eligibility determinations, effect findings, and treatment options.

The committee's applicants should be aware that our office has 30 working days in which to review state plans as stated in A.R.S. § 41-864 , and our staffing level reflects this timeline. Due to a heavy volume of consultations, we were unable to review the documents that we received on September 11, 2002 prior to the committee's October 1, 2002 meeting as requested by the applicant's consultant.

The cultural resource survey of the proposed right-of-way corridor identified five historic-period structures, six archaeological sites, and 16 isolated artifact and/or feature occurrences (IOs). The report was professionally prepared and thorough. My technical comments on the reports are provided on the attached page. Please consider any comments the committee receives from the other land-managing agencies as well.

Arizona State Parks

1300 W. Washington
Phoenix, Arizona
85007

Tel & TTY: 602-542-4174

1-800-285-3703
from (520) area code

Fax: 602-542-4188
http://www.pr.state.az.us

We agree that the Southern Pacific Railroad (AZ T:10:84 ASM), Gila Bend Canal (AZ Z:2:66 ASM), and Enterprise Canal are eligible for inclusion in the State and/or National Registers of Historic Places (SNRHP) under Criterion A (Event) and other criterion may apply as well. We agree that the historic abandoned road segment identified as AZ T:9:63 (ASM) is ineligible for inclusion in the SNRHP under any criterion. We cannot agree with the consultant's eligibility assessment for old U.S. 80 at this time. The significance of the state highway system, of which old U.S. 80 is a part, has not yet been formally evaluated. We suggest treating the highway as if it were eligible for purposes of this plan.

We also agree that archaeological sites AZ T:9:5 (ASM), the Gillespie Dam Site (AZ T:13:18 ASM), AZ T:13:21 (ASM), and AZ T:13:121 (ASM) are eligible for inclusion in the SNRHP under Criterion D (Information Potential). We agree that Sites AZ T:9:60(ASM) is ineligible for inclusion in the SNRHP under any criterion. The Register-eligibility of Site AZ T:13:125 (ASM) is unclear at this time and may require archaeological testing; since this site occurs on BLM we look forward receiving to their eligibility determinations. We agree that the IOs are not eligible under any criterion.

We agree in principle that avoidance and preservation-in-place are appropriate treatment for Register-eligible properties. In fact, the transmission line may help protect historic properties by inhibiting other kinds of development within the proposed corridor.

However, the locations of the poles and access roads are unknown at this time, although it is likely that the Gillespie Dam site cannot be spanned or avoided. In addition, the spanning and temporarily fencing Site AZ T:13:121(ASM) during construction may not constitute avoidance, because the proximity of the petroglyph panels to the proposed centerline may impede important lines-of-sight. Consultation with knowledgeable members of Indian tribes would be an appropriate method to identify such characteristics and evaluate any impacts.

Based on the above, this office cannot assess the plan's effects at this time, and thus cannot concur with determination of impact at this time. Unless all historic properties can be avoided, a determination of negative impacts is likely.

If archaeological sites cannot be avoided by ground-disturbing activities, testing for eligibility and/or data recovery treatment within the portions of the properties directly impacted (and a buffer zone if necessary) is appropriate. We agree that a data recovery program (i.e., archaeological excavation) would be an acceptable treatment for the portions of Gillespie Dam site (AZ T:13:18 ASM).

We offer the following conditions for the committee's consideration:

1) The applicant will continue to consult, on the committee's behalf, with the State Historic Preservation Office (SHPO) to reach a determination of impact. If the

result is a determination of negative impact, the applicant will continue to consult with SHPO to resolve the negative impacts.

2) The applicant will avoid and/or minimize impacts to properties considered eligible for inclusion in the State and National Register of Historic Places to the extent possible.

3) If the applicant decides that archaeological Sites AZ T:9:5 (ASM), the Gillespie Dam Site (AZ T:13:18 ASM), AZ T:13:21 (ASM), AZ T:13:121 (ASM), and AZ T:13:125 (ASM) cannot be avoided, then the applicant will plan and implement an archaeological testing and/or data recovery program in consultation with SHPO.

4) After construction, the applicant, in conjunction with the land-managing agency, if any, will allow Arizona Site Stewards, a volunteer-staffed SHPO program, to periodically inspect the sites present within the corridor for vandalism or other damage.

5) In consultation with SHPO and the land-managing agency, the applicant will consider and assess potential direct and indirect impacts to eligible properties related to new access roads or any existing access roads that require blading.

6) The applicant will follow any instructions from the Arizona State Land Department and the U.S. Bureau of Land Management regarding the treatment of eligible properties situated on their land in consultation with SHPO.

We look forward to receiving a treatment plan for sites that cannot be avoided. We appreciate the committee's cooperation with this office in considering the effects of state plans on cultural resources situated in Arizona. If you have any questions, please contact me at (602) 542-7137 or via mbilsbarrow@pr.state.az.us.

Sincerely,

Matthew H. Bilsbarrow, RPA
Compliance Specialist/ Archaeologist
Arizona State Historic Preservation Office

attachment

cc. w/attachment: Bill Collins, SHPO
Matthew Hill; Environmental Planning Group; 1430 E Fort Lowell Ave; Tucson, AZ 85719

General and Technical Comments on "A Cultural Resources Survey of the Proposed Hassayampa-Jojoba Transmission Line, Maricopa County, Arizona" Environmental Planning Group Cultural Resources Services Technical Paper No. 10. Tucson.

General Comments

1) Overall the report is professionally prepared and well-written. The photographs and maps were helpful.

2) Based on Figure 1, the survey included portions of Arizona Department of Transportation (ADOT) land for State Route 85. Please state the amount of ADOT land in the abstract and report text. ADOT should be offered the opportunity to comment on the portions of the plan that cross their land.

Technical Comment

1) The statement on Page 86 that "all the prior recorders of the site recommended the site was ineligible for inclusion on the National Register" is overly broad. At least one previous study, on file at ADOT but not cited in the report, reached the opposite conclusion. The citation is: Bilsbarrow, Matthew 1998 An Evaluation of the National Register of Historic Places-Eligibility of Three Road Segments of Old U.S. 80, West of Gila Bend, Southwestern Maricopa County, Arizona in A Cultural Resources Survey of Interstate-8 Highway Corridor in the vicinity of Painted Rock and Theba Traffic Interchanges, West of Gila Bend, Southwestern Maricopa County, Arizona by Matthew H. Bilsbarrow, Jennifer K. Tweedy, and Andrew R. Dutt. Archaeological Research Services Report No. 97-42. Tempe.

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THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • WWW.AZGFD.COM

October 17, 2002

Ms. Laurie A. Woodall, Chairman
Power Plant & Transmission Line Siting Committee
Office of the Attorney General
Phoenix, AZ 85007

RE: Hassayampa to Jojoba 500kV Transmission Line Project
Application for a Certificate of Environmental Compatibility

Dear Ms. Woodall:

The Arizona Game and Fish Department (Department) has reviewed the Application for a Certificate of Environmental Compatibility (CEC) for the Hassayampa to Jojoba 500kV Transmission Line Project. We understand that the proposed transmission line will be constructed adjacent to existing transmission lines within a Bureau of Land Management designated utility corridor. The area has been previously disturbed on both ends of the proposed development by power generation facilities and industrial developments, as well as within the corridor by the existing transmission line.

Based on our review of the standard operating procedures and mitigation measures outlined in the CEC, we understand that Gila Bend Power Partners has committed to activities that would reduce the impact to biological resources, including surveying for southwestern willow flycatchers prior to construction, employing raptor protection practices on power line structures, and keeping vegetation disturbance to a minimum. The Department supports these activities and would like to emphasize the importance of minimizing the disturbance to vegetation, particularly in drainage channels and along streambanks.

Thank you for the opportunity to review and comment on this CEC. Please contact me at (602) 789-3602 if you have any questions regarding this letter.

Sincerely,

John Kennedy
Habitat Branch Chief

JK:am

cc: Bill Knowles, Habitat Specialist, Region IV, Yuma
Russ Haughey, Habitat Program Manager, Region VI, Mesa
Lauren Weinstein, Environmental Planning Group

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BUCKEYE ARIZONA

Town of Buckeye

October 3, 2002

Ms. Laurie Woodall
Chairman, Arizona Power Plant and Transmission Line Siting Committee
Office of the Attorney General
1275 W. Washington
Phoenix, Arizona 85007

RE: Hassayampa to Jojoba 500kV Transmission Line Project

Dear Ms. Woodall:

The Town of Buckeye has received both a letter (in June 2002) and a copy of the application for a Certificate of Environmental Compatibility for the Gila Bend Power Partner's proposed Hassayampa to Jojoba 500kV Transmission Line Project. In addition, our planning department was contacted regarding the planned land use for the portion of the project that crosses Buckeye's jurisdiction. As indicated in that contact, we do not have any plans for this area at this time. Given we have not identified any conflicts with existing or future land use and the proposed line would be adjacent to another 500kV transmission line and within an existing utility corridor, we do not see any conflicts with this project.

We appreciate the efforts to coordinate with the Town on this matter.

Sincerely,

Joseph Blanton
Town Manager

cc: Mayor and Town Council
Scott Ruby, Town Attorney
Lauren Weinstein, EPG

100 North Apache• Buckeye, Arizona 85326 • (623) 386-4691•FAX (623) 386-7832

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TOWN OF GILA BEND

The Heart of Arizona

October 8, 2002

Gila Bend Power Partners, LLC
C/o Mr. Robert A. Innamorati
PowerDevelopment Enterprises, LP
5949 Sherry Lane
Suite 1880
Dallas, Texas 75225

Dear Mr. Innamorati;

This letter is a follow up to our letter of January 15, 2001 that outlined our Town's support of Gila Bend Power Partner's ("GBPP") proposed 500 kV Transmission Line along Watermelon Road ("Segment 3") and its Power Generation Facility (the Project") northwest of the Town. As outlined in that letter we continue to support development of the Segment 3 line and the Project.

Our understanding is that GBPP had a hearing for a Certificate of Environmental Compatibility (CEC") on October 1 in Gila Bend Town Hall relating to the 500kV line segment ("Segment 1") from the Hassayampa to Jojoba Switchyards. We understand that the CEC for this Segment 1 line is the last link to the transmission facilities you will need to make the Project physically and economically viable and we therefore fully support and encourage your efforts in getting this last and vital link in place for the benefit of your Project, the Town of Gila Bend and the entire Southwest Valley.

We look forward to continuing our working relationship with you in making the entire Project and its Segment 1 and 3 lines a success. Should you or any member of your GBPP team have any questions please do not hesitate to call me.

Sincerely,

Shane D. Dille
Town Manager

Cc: Town Council

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Director and the Secretary of the Interior before the recommendations in this plan are submitted to the President and Congress.

FLPMA requires the Secretary of the Interior to report his recommendations to the President by October 21, 1991, and the President has until October 21, 1993, to send his recommendations to Congress. Only Congress can designate a WSA as wilderness, but Congress has set no time limit for acting on the President's recommendations.

The analysis of WSAs described in this RMP/EIS result from the application of BLM's *Wilderness Study Policy* (Federal Register, 47:23, February 3, 1982) during the preparation of the Lower Gila South Management Situation Analysis (MSA). The Wilderness Study Policy directed BLM to apply certain criteria and quality standards to each WSA to ensure that wilderness suitability recommendations are (1) based on full consideration of all multiple resource values of public lands, (2) consistent with established national policy, and (3) that all interested and affected members of the public and state and local governments are made aware of the study and given adequate opportunity to comment and otherwise be involved in the study process.

Issue 3: Land Tenure Adjustment

Special attention is needed for identified areas where land ownership patterns pose a problem for proper management of the federal lands. Some land ownership adjustments such as exchanges, sales, state selections, and acquisitions would be beneficial to the management of wilderness, crucial wildlife habitat, and other resources. Special attention would be given to administrative costs, location, manageability, and resource values of all areas selected for land ownership adjustments.

Needed resolutions include (1) which lands should be retained in federal ownership, (2) which lands should be disposed of through either exchange or sale, (3) which private, state, or federal land exchanges would be used to consolidate ownership to benefit wilderness, wildlife, and cultural resources, and (4) where nonfederal surface or subsurface acreage should be acquired to benefit specific BLM programs?

Split Estate. The split estate issue is one not confined to the Lower Gila South RMP/EIS Area, but is a statewide problem. Therefore, it is important to identify those areas where the split estate occurs in order to help facilitate the statewide program.

Disposal of those federal minerals that underlie either state or private lands may be accomplished by exchanges or sales in accordance with Section 209 of the *Federal Land Policy and Management Act*. Acquisition of the state or private mineral estates that underlie federal surface would be accomplished by exchange.

Issue 4: Utility Corridors

Private and public utility companies and other agencies need to know where utility corridors would be designated so they can develop their plans based on known, approved corridors dedicated primarily for the use and construction of their structural facilities. Other public land users also need to know where future powerlines and pipelines will be located. If WSA boundaries are not adjusted to allow for utility corridor expansion, there could be conflicts between five utility corridors and eight WSA boundaries. This RMP/EIS identifies 10 existing utility rights-of-way that should be designated to serve as utility corridors and recommends that each of these corridors be one-mile-wide. The proposed corridors are (1) El Paso Natural Gas, (2) Palo Verde-Devers, (3) San Diego Gas and Electric Interconnect, (4) Palo Verde-Kyrene, (5) Liberty-Gila Bend, (6) Gila Bend-Ajo, (7) Santa Rosa-Gila Bend, (8) Tucson Electric Power, (9) Interstate 8, and (10) Interstate 10 (Map 1-2).

The Interstate 10 corridor, because of resource concerns, will have a restriction regarding overhead lines. Due to the close proximity of important bighorn sheep waters and lambing grounds north of the Interstate and because of terrain features north of the Interstate, overhead transmission lines will not be allowed north of I-10 between townships 16 W. and 18 W.

Currently there are two communication sites in the RMP/EIS area, Oatman Mountain west of Gila Bend and Guadalupe Mountain east of Quartzsite, both of which have room for expansion. Other potential sites would be studied on a case-by-case basis, and a communication site plan would be developed before construction could begin.

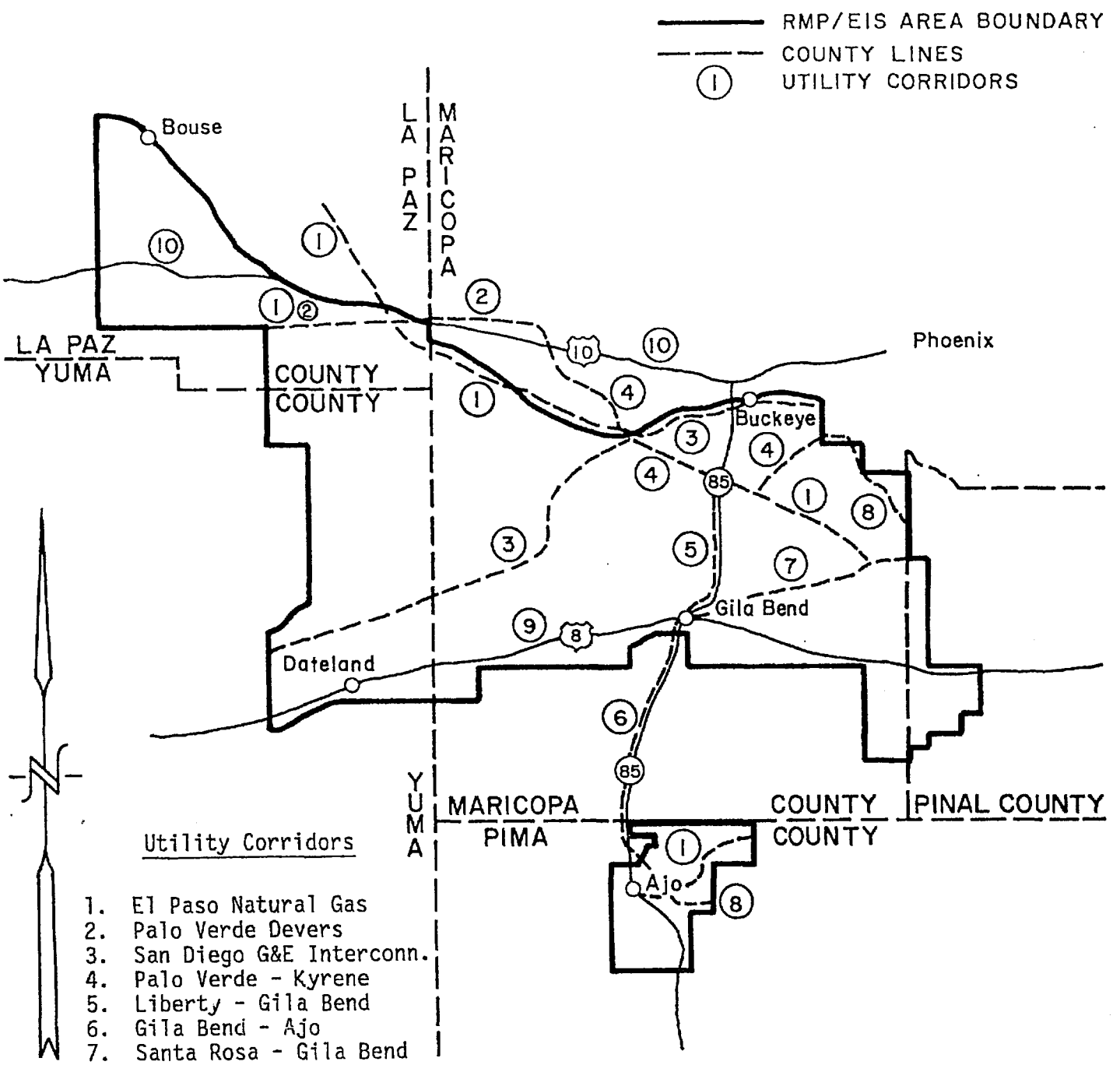
Issue 5: Fred J. Weiler Green Belt (Will Not Be Analyzed In This RMP/EIS)

Approximately 63,000 acres of public land are within the Fred J. Weiler Green Belt, which extends along the Gila River from the Sierra Estrella Park on the eastern edge of the RMP/EIS area boundary to 12 miles west of Dateland, Arizona. Following is a brief history of land use in this area.

Within the area now known as the Green Belt, Public Land Order 1015 withdrew 6,896 acres of land in 1954 to the U.S. Fish and Wildlife Service (FWS). At this time, the FWS entered into a cooperative management agreement with the Arizona Game and Fish Department for these withdrawn lands. These lands were segregated from all forms of appropriation under the public land laws, including the mining laws but not the mineral leasing laws.

In 1970 approximately 63,000 acres were studied and it was determined that they would be retained under the Classification for Multiple Use Act of 1964. A classification for multiple use was placed on the subject lands segregating the 63,000 acres (Fred J. Weiler Green Belt)

MAP 1-2



LOWER GILA SOUTH RMP/EIS AREA

to be acquired is shown in Appendix 9, and the mineral estate to be disposed of is shown in Appendix 10.

Utility Corridor Issue

Over the past 10 years there has been an increase in major utility systems within the RMP/EIS area. This increase is largely because of the Palo Verde Nuclear Generating Station (PVNGS) that lies in the northeastern portion of the area. Because ownership of the PVNGS is divided among Arizona, California, New Mexico, and Texas utility companies, there is a need for transmission systems to accommodate the out-of-state owners. Other interstate systems include two interstate highways and oil and gas elines. Along with the interstate systems there are also various intrastate systems that affect the RMP/EIS area.

In order to accommodate the existing systems and provide for the orderly development of future systems, the *Proposed Action* would designate 10 corridors (each one-mile-wide) (see Map 1-2). This would provide space for construction of future utility projects and allow for multiple occupancy by compatible users. Section 503 of FLPMA authorizes the formal designation of utility corridors.

NO ACTION ALTERNATIVE

The *No Action* alternative is the current management direction, assuming no changes in policy or funding, and it provides a baseline for comparison with the other alternatives. Currently, the Lower Gila South RMP/EIS area lacks formal management direction established through approved land use plans.

Rangeland Management Issue

Level of Grazing Management. Under the *No Action* alternative, yearlong grazing would continue on 1,592,278 acres of public lands on 22 perennial-ephemeral allotments and eight perennial-ephemeral custodial leases. Livestock numbers would continue to be authorized on the perennial-ephemeral allotments and leases up to the present active preference of 60,524 animal unit months (AUMs). The remaining 18 ephemeral allotments involving 416,954 acres of public land would continue to be managed in accordance with the Special Ephemeral Rule. These allotments do not produce enough perennial forage on a sustained yield basis to issue yearlong grazing permits. On the perennial-ephemeral allotments, supplemental permits could be issued for ephemeral forage if the forage were known to exist and ephemeral grazing did not conflict with other resources.

Rangeland Developments. BLM would not construct new rangeland developments and would not maintain existing developments. Operator-built developments would be authorized by either cooperative agreements or range improvement permits on a case-by-case basis as needed to facilitate livestock management.

Implementation. Since existing grazing management would continue, a specific implementation of this alternative would not be required. BLM would develop a wild burro capture plan to remove all existing burros from the Painted Rock Reservoir Herd Management Area.

Wilderness Issue

No designated BLM wilderness areas currently exist in the RMP/EIS area. Under the *No Action* alternative none of the 12 WSAs would be analyzed for designation as wilderness. All 621,931 acres (Table 2-3) would be managed under multiple use management principles with no wilderness restrictions. Subsequent management actions would be guided by laws, regulations, BLM policy, and the approved Lower Gila South RMP. This alternative represents the *No Wilderness* alternative required by BLM Wilderness Study Policy.

Land Tenure Issue

Disposal (Exchange or Sale). No lands would be proposed or offered for disposal. This in effect would require the retention of all public lands in the RMP/EIS area and no change of ownership pattern would occur (see Table 2-4).

TABLE 2-4
SURFACE ACREAGE SUITABLE FOR DISPOSAL BY ALTERNATIVE
Bureau of Land Management, Phoenix District, Arizona

Proposed Action	No Action	Resource Production	Resource Protection	Environmental Protection
73,123	0	73,123	73,123	73,123

SOURCE: Phoenix District maps and files

Acquisition. Lands would not be acquired under this alternative. There would be no change in ownership pattern, and no areas would be acquired for resource enhancement (see Table 2-5).

TABLE 2-5
ACREAGE SUITABLE FOR ACQUISITION BY ALTERNATIVE
Bureau of Land Management, Phoenix District, Arizona

Benefiting Resource or Program	Proposed Action	No Action	Resource Production	Resource Protection	Environmental Protection
Wilderness	2,643	0	0	3,083	6,396
Wildlife	11,120	0	2,200	16,340	17,840
Botanical	2,440	0	0	2,440	2,440
Multiple Use	20,642	0	20,642	20,642	20,642

SOURCE: Phoenix District files

Compact Disc

-Application for Certificate of Environmental Compatibility

Gila Bend Power Partners L.L.C.

TO REVIEW SEE DOCKET SUPERVISOR

DOCKET
L-00000V-02-0119-00000

Lower Gila South
Resource Management Plan
Environmental Impact Statement

Final

Phoenix District, AZ

7

Thirteen responses to the BLM informational letter were received and the individuals and agencies that sent responses are listed below. Copies of each letter in the order of the date they were written are also included.

Leigh Kuwanwisiwma
Hopi Tribe

William Kendall
Arizona Department of Agriculture

Terry Worman
Pebble Pickin Posse

Tim Flood
Friends of Arizona Rivers

Dale Owen
Private Citizen

J.B. Jacks
Private Citizen

Cindy Lester
Corps of Engineers

James Gross
Arizona State Land Department

Roland Tang
Arizona Department of Transportation

Angie McIntire
Arizona Game and Fish Department

Paul Herndon
Arizona Public Service

Robert Kondziolka
Salt River Project

Steven Spangle
U.S. Fish and Wildlife Service

Bob Woodring
Maricopa County Department of Transportation

cc: GD, MH

MK
Kathy
Irene
Chris
Camille

THE HOPI TRIBE

Wayne Taylor, Jr.
CHAIRMAN

Elgean Joshevama
VICE-CHAIRMAN

June 6, 2002

Rick Cooper, Acting Field Manager
Attention: Camille Champion
Bureau of Land Management, Phoenix Field Office
21605 North 7th Avenue
Phoenix, Arizona 85027

Dear Acting Field Manager Cooper,

Thank you for your correspondence dated June 3, 2002, regarding the Bureau of Land Management (BLM), Phoenix Field Office requesting comments for the proposed right-of-way for the Gila Bend Power Partners - Hassayampa to Jojoba Transmission Project in Maricopa County.

As we stated to you in letters dated May 20, 2002, regarding the preparation of an environmental assessment for a proposed land exchange, and May 28, 2002, regarding the preparation of resource management plans for the Agua Fria National Monument and other lands in central Arizona, the Hopi Tribe claims cultural affiliation to prehistoric cultural groups in central Arizona, and therefore we appreciate your continuing requests for our comments and cultural concerns relating to these areas.

As we also stated in those letters, the Hopi Cultural Preservation Offices supports the identification and avoidance of prehistoric archaeological sites, and due to BLM Instructional Memoranda 98-131-2, opposes any proposal on BLM land with the potential to disturb the human remains of our ancestors.

Your letter notes, the Bureau of Land Management has decided to prepare an Environmental Assessment to determine whether or not the project will have significant effects, discussing issues including archaeological sites. Therefore, we accept your invitation to initiate consultations in this planning process.

And therefore, to address your letter and to ensure that our concerns are fully considered and incorporated into the process, we reiterate our May 20 and 28 invitations to representatives of BLM Phoenix Field Office to present the NLCS land exchange proposal, initiate consultations in the development of resource management plans for lands in central Arizona, and this proposal at our upcoming administrative meetings in Kykotsmovi. Please contact Lanell Yowytewa at 928-734-6636 to confirm an appointment.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Cultural Preservation Office

xc: Arizona State Historic Preservation Office

JANE DEE HULL
Governor

SHELDON R. JONES
Director

Arizona Department of Agriculture

1688 W. Adams Street, Phoenix, Arizona 85007
(602) 542-4373 FAX (602) 542-5420

BUREAU OF LAND MANAGEMENT
PHOENIX FIELD OFFICE
PM
AM
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FORMATION
COPY

June 7, 2002

Rick Cooper, Acting Field Manager
United States Department of the Interior
Bureau of Land Management
Phoenix Field Office
21605 North 7th Avenue
Phoenix, Arizona 85027

Re: Comments for the Proposed Right-of-Way for the Gila Bend Power Partners – Hassayampa to Jojoba Transmission Project, Maricopa County, Arizona

Dear Mr. Cooper:

Arizona State Law requires that the Arizona Department of Agriculture be notified in writing, with confirmation, prior to the anticipated destruction of any protected native plants during land clearing activity. On privately owned land the notification period ranges from 20 days to 60 days. The notification period on state lands is 60 days. Notifications must be resubmitted on projects not completely cleared within one year of the date of confirmation if additional clearing is to take place. It is recommend that as much of the native vegetation as is possible be left in place and protected during construction. The use of local native vegetation is recommended for use in landscaping and revegetation on all government projects. The protection and salvage of protected native plants is encouraged to the greatest extent feasible.

Because of the large number of protected native plant species occurring in Maricopa County I would recommend that a plant survey be completed of the project site. A listing of plants that have been reported as occurring in Maricopa County is attached. This listing may not include all of the regulated plants that occur there. Please let me know if additional plants are encountered. A complete listing of Protected Native Plants can be found in Appendix A. According to Section 3-905.B of the Arizona Native Plant Law a consultation with the Director of the Arizona Department of Agriculture may be required if a Highly Safeguarded Plant is impacted by a project.

Plant transportation permitting and tagging are required prior to the removal of protected native plants from a property. Transportation permitting is not required when the plants are being relocated on the same property. Native plant permit application and notification forms, and Appendix A, the listings of protected native plants by category; as well as, general information on the Arizona Native Plant Law, Seed Law and Noxious Weed Regulations can be obtained at: http://agriculture.state.az.us. You can correspond with me at the address listed below. You may also contact me by telephone at: 520.628.6317, by FAX at 520.628.6961, or by email at: bill.kendall@agric.state.az.us

Sincerely Yours,

William T. Kendall, Special Investigator #187
Office of Review and Investigations

Arizona Department of Agriculture
400 West Congress Street, Suite #124, Box #4
Tucson, Arizona 85701-1311

The Listing of Protected Species Reported as Occurring in Maricopa County

The following protected native plants have been reported as occurring in this county. The Arizona Native Plant Law found in the Arizona Revised Statutes affords these plants. All species in the Agavaceae (Agave Family, including the Nolinaceae, Nolina Family), Cactaceae (Cactus Family), Liliaceae (Lily Family), and the Orchidaceae (Orchid Family) are protected. Individual species belonging to other families are also protected. The following list shows only those plants that have been reported as occurring in this county Additional, and as yet unreported, species may also be encountered. Please report any unrecorded species so that they may be added to this listing. Whenever possible the range in elevation is given for the distribution of this plant as found within Arizona.

Botanical Name, Common Name	Elevation	NPL	ESA
Abutilon parishii S. Watson, Tucson Indian Mallow	3,000'- 4,800'	SR	
Agave arizonica Gentry & Weber, Arizona Agave	2,900'- 6,200'	HS	LE
Agave chrysantha Peebles, Golden-flowered Agave	3,000'- 7,000'	SR	
Agave delamateri Hodgson & Slauson, Tonto Basin Agave	2,800'- 5,000'	SR	
Agave murpheyi Gibson, Hohokam Agave	1,300'- 3,200'	HS	
Agave toumeyana Trel. ssp. *toumeyana*, Toumey Agave	2,000'- 5,000'	SR	
Allium macropetalum Rydb., Large-petaled Onion	1,000'- 7,000'	SR	
Aquilegia chrysantha A. Gray, Golden-flowered Columbine	3,000'-11,000'	SR	
Atriplex hymenelytra (Torr.) S. Watson, Desert Holly Saltbush	500'- 3,000'	SR	
Bursera microphylla A. Gray, Littleleaf Elephant Tree	1,000'- 3,600'	SR	
Calochortus ambiguus (Jones) Ownbey, Mountain Mariposa	3,000'- 8,000'	SR	
Calochortus kennedyi Porter var. *kennedyi*, Desert Mariposa	2,500'- 5,000'	SR	
Calochortus kennedyi Porter var. *munzii* Jeps., Yellow-flowered Mariposa	2,500'- 5,000'	SR	
Carnegiea gigantea (Engelm.) Britt. & Rose, Giant Saguaro Syn.: *Cereus giganteus* Engelm.	600'- 5,100'	SR	

Carnegiea gigantea (Engelm.) Britt. & Rose, Giant Saguaro –Crested Form Syn.: *Cereus giganteus* Engelm.	600'- 5,100'	HS
Castela emoryi (A. Gray) R. Moran & Felger, Emory Crucifixion Thorn Syn.: *Holacantha emoryi* A. Gray	500'- 2,000'	SR
Cercidium floridum Benth., Blue Paloverde	141'- 6,000'	SA
Cercidium microphyllum (Torr.) Rose & Johnst., Foothill Paloverde	500'- 4,000'	SA
Chilopsis linearis (Cav.) Sweet var. *arcuata* Fosberg, Western Desert-willow	1,000'- 6,000'	SA
Coryphantha vivipara (Nutt.) Britt. & Rose var. *bisbeeana* (Orcutt) L. Benson, Bisbee Beehive Cactus	3,000'- 5,200'	SR
Dichelostemma pulchellum (Salisbi) Heller var. *pauciflorum* (Torr.) Hoover, Few-Flowered Covena	141'- 5,000'	SR
Dudleya arizonica (Nutt.) Britt. & Rose, Arizona Dudleya Syn.: *Echeveria pulverulenta* Nutt. ssp. *arizonica* (Rose) Clokey	500'- 2,500'	SR
Dudleya saxosa (M.E. Jones) Britt. & Rose ssp. *collomiae* (Rose) Moran , Collom Dudleya Syn.: *Echeveria collomiae* (Rose) Kearney & Peebles	2,000'- 6,000'	SR
Echeandia flavescens (Schultes & Schultes) Cruden, Yellow Amber Lily Syn.: *Anthericum torreyi* Baker	6,000'- 9,000'	SR
Echinocereus engelmannii (Parry ex Engelm.) Lemaire var. *acicularis* L. Benson, Needle-spined Hedgehog Cactus	1,000'- 3,500'	SR
Echinocereus engelmannii (Parry ex. Engelm.) Lemaire var. *engelmannii*, Strawberry Hedgehog Cactus	141'- 5,000'	SR
Echinocereus fasciculatus (Engelm. ex B.D. Jackson) L. Benson var. *bonkerae* (Thornber & Bonker) L. Benson, Bonker Hedgehog Cactus	3,000'- 6,000'	SR

Syn.: *Echinocereus boyce-thompsonii* Orcutt var. b*onkerae* Peebles; *Echinocereus fendleri* (Engelm.) Rümpler var. *bonkerae* (Thornber & Bonker) L. Benson			
Echinocereus fasciculatus (Engelm. ex B.D. Jackson) L. Benson var. *boyce-thompsonii* (Orcutt) L. Benson, Boyce-Thompson Bundle Hedgehog Cactus	1,000'- 4,000'	SR	
Syn.: *Echinocereus boyce-thompsonii* Orcutt			
Echinocereus fasciculatus (Engelm. ex B.D. Jackson) L. Benson var. *fasciculatus*, Bundle Hedgehog Cactus	2,500'- 5,000'	SR	
Syn.: *Echinocereus fendleri* (Engelm.) Rümpler var. *fasciculatus* (Engelm. Ex B.D. Jackson) N.P. Taylor, *Echinocereus fendleri* (Engelm.) Rümpler var. *robusta* L. Benson; *Mammillaria fasciculata* Engelm.			
Echinocereus fendleri (Engelm.) Rümpler var. *boyce-thompsonii* (Orcutt) L. Benson, Boyce-Thompson Fendler Hedgehog Cactus	1,000'- 4,000'	SR	
Echinocereus fendleri (Engelm.) Rümpler var. *fendleri*, Fendler Hedgehog Cactus	6,000'- 8,000'	SR	
Echinocereus nicholii (L. Benson) Parfitt., Nichol Hedgehog Cactus	1,000'- 3,000'	SR	
Syn.: *Echinocereus engelmannii* (Parry ex Engelm.) Lemaire var. *nicholii* L. Benson			
Echinocereus rigidissimus (Engelm.) Hort. F.A. Haage., Arizona Rainbow Hedgehog Cactus	4,000'- 5,200'	SR	
Syn.: *Echinocereus pectinatus* (Scheidw.) Engelm. var. *rigidissimus* (Engelm.) Engelm. ex Rümpler			
Echinocereus triglochidiatus Engelm. var. *arizonicus* (Rose ex Orcutt) L. Benson, Arizona Claret-cup Cactus	3,400'- 5,300'	SR	LE
Echinomastus erectocentrus (Coult.) Britt. & Rose var. *acunensis* (W.T. Marshall) L. Benson, Red-spined Pineapple Cactus	1,300'- 2,000'	HS	CO6
Syn.: *Neolloydia erectocentra* (Coult.) L. Benson var. *acunensis* (W.T. Marshall) L. Benson			

Epipactis gigantea Douglas ex Hook., Giant Helleborine	3,000'- 8,000'	SR
Erigeron piscaticus Nesom, Fish Creek Fleabane	2,200'- 3,500'	SR
Ferocactus cylindraceus (Engelm.) Orcutt. var. *lecontei* (Engelm.) H. Brao, LeConte Barrel Cactus Syn.: *Ferocactus acanthodes* (Lemaire) Britt. & Rose var. *lecontei* (Engelm.) Lindsay; *Ferocactus lecontei* (Engelm.) Britt. & Rose	1,000'- 3,000'	SR
Ferocactus emoryi (Engelm.) Orcutt, Red-spined Barrel Cactus Syn.: *Ferocactus covillei* Britt. & Rose	1,500'- 3,000'	SR
Ferocactus wislizenii (Engelm.) Britt. & Rose, Fishhook Barrel Cactus	1,000'- 5,600'	SR
Fouquieria splendens Engelm., Coachwhip Ocotillo	141'- 6,500'	SR
Graptopetalum rusbyi (Greene) Rose, Rusby Stonecrop Syn.: *Echeveria rusbyi* (Greene) Nels. & Macbr.	2,500'- 5,000'	SR
Hesperocallis undulata A. Gray, Ajo Desert Lily	141'- 2,000'	SR
Lobelia cardinalis L. ssp. *graminea* (Lam.) McVaugh, Grassland Cardinal Flower	3,000'- 7,500'	SR
Mammillaria grahamii Engelm. var. *grahamii*, Graham Pincushion Cactus	3,000'- 5,200'	SR
Mammillaria microcarpa Engelm., Small-fruited Pincushion Cactus	1,000'- 5,000'	SR
Mammillaria tetrancistra Engelm., Corky-seeded Pincushion Cactus	400'- 5,000'	SR
Mammillaria thornberi Orcutt, Thornber Clustered Pincushion Cactus	600'- 2,500'	SR
Nolina microcarpa S. Watson, Small-fruited Bear Grass	3,000'- 6,500'	HR&SR
Olneya tesota A. Gray, Desert Ironwood	500'- 2,500'	HR&SA
Opuntia acanthocarpa Engelm. & Bigel. var. *coloradensis* L. Benson, Colorado Desert Cholla	2,000'- 4,300'	SR

Opuntia acanthocarpa Engelm. & Bigel. var. *major* L. Benson, Major Cholla Syn.: *Opuntia acanthocarpa* Engelm. & Bigel var. *ramosa* Peebles	1,000'- 3,000'	SR
Opuntia acanthocarpa Engelm. & Bigel. var. *thornberi* (Thornber & Bonker) L. Benson, Thornber Cholla Syn.: *Opuntia thornberi* Thornber & Bonker	2,500'- 3,500'	SR
Opuntia arbuscula Engelm., Pencil Cholla	1,000'- 3,000'	SR
Opuntia basilaris Engelm. & Bigel. var. *basilaris*, Beavertail Cactus	141'- 9,000'	SR
Opuntia bigelovii Engelm., Teddy Bear Cholla	141'- 3,000'	SR
Opuntia campii ined., Camp Cholla	2,600'- 3,100'	SR
Opuntia chlorotica Engelm. & Bigel., Pancake Prickly-pear Cactus	1,800'- 6,000'	SR
Opuntia echinocarpa Engelm. & Bigel, Silver Cholla	1,000'- 5,600'	SR
Opuntia emoryi Engelm., Devil Cholla Syn.: *Opuntia stanlyi* Engelm. ex B.D. Jackson var. *stanlyi*	2,500'- 4,000'	SR
Opuntia engelmannii Salm-Dyck ex Engelm. var. *engelmannii*, Engelmann Prickly-pear Cactus Syn.: *Opuntia phaeacantha* Engelm. var. *discata* (Griffiths) L. Benson & Walkington	1,000'- 5,000'	SR
Opuntia engelmannii Salm-Dyck ex Engelm. var. *flavispina* (L. Benson) Parfitt & Pinkava, Yellow-spined Prickly-pear Cactus Syn.: *Opuntia phaeacantha* Engelm. var. *flavispina* L. Benson	1,200'- 3,500'	SR
Opuntia fulgida Engelm. var. *fulgida*, Chain-fruited Cholla	1,000'- 4,500'	SR
Opuntia leptocaulis DC., Desert Christmas Cholla	200'- 3,000'	SR
Opuntia phaeacantha Engelm. var. *major* Engelm., Major Prickly-pear Cactus	2,000'- 7,000'	SR
Opuntia phaeacantha Engelm. var. *phaeacantha*, Purple-fruited Prickly-pear Cactus	4,500'- 8,000'	SR
Opuntia ramosissima Engelm., Diamond Cholla	141'- 3,000'	SR
Opuntia spinosior (Engelm.) Toumey, Cane Cholla	2,000'- 6,500'	SR
Opuntia wigginsii L. Benson, Wiggin Cholla	141'- 1,000'	SR

Peniocereus greggii (Engelm.) Britt & Rose var. *transmontanus*, Desert Thread-cereus	1,000'- 3,500'	SR	
Prosopis glandulosa Torr. var. *torreyana* (Benson) M.C. Johnst., Western Honey Mesquite Syn.: *Prosopis juliflora* (Swartz) DC. var. *torreyana* Benson	141'- 5,000'	HR&SA	
Prosopis pubescens Benth., Screwbean Mesquite	141'- 4,000'	HR&SA	
Prosopis velutina Woot., Velvet Mesquite Syn.: *Prosopis juliflora* (Swartz) DC. var. *velutina* (Woot.) Sarg.	1,000'- 4,500'	HR&SA	
Psorothamnus spinosus (A. Gray) Barneby, Spiny Smoke Tree Syn.: *Dalea spinosa* A. Gray	141'- 1,500'	SA	
Purshia subintegra (Kearney) J. Hendrickson, Arizona Cliffrose Syn.: *Cowania subintegra* Kearney	2,400'- 4,000'	HS	LE
Sapium biloculare (S. Watson) Pax, Mexican Jumping-bean	1,000'- 2,500'	SR	
Stenocereus thurberi (Engelm.) F. Buxbaum, Thurber Organpipe Cactus Syn.: *Cereus thurberi* Engelm.; *Lemaireocereus thurberi* (Engelm.) Britt. & Rose	1,000'- 3,500'	SR	
Tumamoca macdougalii Rose, MacDougal Tumamoc Globeberry	2,000'- 3,400'	SR	
Yucca elata Engelm. var. *elata*, Soaptree Yucca	1,500'- 6,000'	SR	

Arizona Status – Arizona Native Plant Law (NPL)

The category of protection given to the species listed in the Arizona Native Plant Law is given in an abbreviated format: ER (Export Restricted); HR (Harvest Restricted); HS (Highly Safeguarded); SA (Salvage Assessed), and SR (Salvage Restricted).

Federal Status – Endangered Species Act (ESA)

The status of the species listed in the Endangered Species Act is given in an abbreviated format: LE (Listed Endangered - a species in danger of extinction throughout all or a significant portion of it's range); LT (Listed Threatened – a species likely to become an endangered species within

the foreseeable future throughout all or a significant portion of it's range); PE (Proposed Endangered – taxa proposed to be listed as endangered); PT (Proposed Threatened - taxa proposed to be listed as threatened), and C (Candidate Species). Candidate Species are given with the listing priority: 01 (monotypic genus with an imminent/high threat); 02 (species with an imminent/high threat); 03 (subspecies with an imminent/high threat); 04 (monotypic genus with a non-imminent/high threat); 05 (species with a non-imminent/high threat); 06 (subspecies with a non-imminent/high threat); 07 (monotypic genus with an imminent/moderate to low threat); 08 (species with an imminent/moderate to low threat); 09 (subspecies with an imminent/moderate to low threat); 10 (monotypic genus with a non-imminent/moderate to low threat); 11 (species with a non-imminent/moderate to low threat, and 12 (subspecies with a non-imminent/ moderate to low threat).

Note that the listing of species and the status of protection given to those species changes periodically in both the Arizona Native Plant Law and the Endangered Species Act.

This listing has been prepared based upon the records found in numerous sources, and information provided by knowledgeable people. This listing is not to be considered a legal document.

Please contact me with any corrections or additions that should be made this listing.

William T. Kendall, Officer #187
Office of Review and Investigations

Arizona Department of Agriculture
400 West Congress, Suite 124, Box 4
Tucson, Arizona 85701-1311

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Fax: 520.628.6961
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Mobile: 520.237.2072
E-mail: bill.kendall@agric.state.az.us

9A 6/18/02

6/17/2002

Dear Mr. Cooper,

This is regarding the proposed right-of-way for the Gila Bend Partners transmission project.

As the project is well within the BLM designated utility corridor, we see no reason this project will impact any recreation or access to any of the desert area around the proposed project area.

Since the electricity and infrastructure associated with this project is needed to meet the growing power needs of Arizona, we see no reason this project should not continue.

Terry Worman
Pebble Pickin Posse

538 W. Emig Rd
Phx AZ 85053

PHOENIX, AZ 850
PM
15 JUN
2002

BLM
21605 N. 7th Ave
Phx, AZ 85027
Att: R. Cooper

T. Flood
Friends of Az Rivers
503 E. Medlock Dr
Phoenix, AZ 85012

PHOENIX AZ 850
PM
18 JUN
2002

Camille Champion
US BLM Phx Field Office
21605 N 7th Ave
Phoenix AZ 85027

85027+2929 57

If you have any questions, please contact Camille Champion at (623) 580-5526.

Sincerely,

Rick Cooper
Acting Field Manager

Enclosure
Project Map

My comments

1. What opportunities are there for the poles or lines to be made harmless to wildlife? If harmful, will BLM ask for offsite mitigation/compensation?
2. How will the crossing at the Gila River intersection be constructed to minimize impacts to wildlife, viewshed?
3. How will exotic plants be prevented and controlled in the right of way?
4. How will traffic be controlled? by the public and service vehicles
5. Any opportunity for mitigation offsite?

TIM FLOOD
503 E Medlock DR

CONVERSATION RECORD

DATE: June 18, 2002

TIME: 1:30 pm

FROM OR TO: Mr. Dale Owen PHONE: 602-240-2288

SUBJECT: Gila Bend Power Partners 500 kV

SUMMARY:

Dale Owen phoned to asked if the proposed power line would be within the existing corridor. I explained it would be.

PERSON DOCUMENTING THE CALL: Camille Champion

SIGNATURE: [signature]

DATE: 06/18/2002

6/21/02

T1

J. B. Jacks
9500 Osuna Rd. NE # 324
Albuquerque, NM 87111-2282

BLM - Phoenix Field Office
21605 N. 7th Ave
Phoenix, AZ 85027

Re: 2800(020) AZA-31468

I hope you spend minimum NEPA dollars on putting in a power line in an already approved utility corridor.

Please note new address (above), old address:

P.O. Box 33
Pahrump, NV 89041

RECEIVED
BLM
2002 JUN 20 AM 11:59
BUREAU OF LAND MGT
PHOENIX, ARIZONA

Respectfully,

J.B. Jacks

(505) 323-8738

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 760
PHOENIX, ARIZONA 85012-1936

June 21, 2002

REPLY TO

Office of the Chief
Regulatory Branch

Mr. Rick Cooper
Bureau of Land Management
Phoenix Field Office
21605 North 7th Avenue
Phoenix, Arizona 85027

File Number: 2002-01064-EHB

Dear Mr. Cooper:

Reference your letter of June 3, 2002 in which you requested comments for a proposed right-of-way on public lands for the Gila Bend Power Partners - Hassayampa to Jojoba Transmission Project involving one 500kV power line that is approximately 200 feet wide and 20 miles in length in the Gila River at (Section 28, T2S, R5W), Maricopa County, Arizona.

This activity may require a Department of the Army permit issued under Section 404 of the Clean Water Act. A Section 404 permit is required for the discharge of dredged or fill material into the "waters of the United States," including adjacent wetlands. Examples of activities requiring a permit are placing bank protection, temporary or permanent stock-piling of excavated material, grading roads, grading (including vegetative clearing operations) that involves the filling of low areas or leveling the land, constructing weirs or diversion dikes, constructing approach fills, and discharging dredged or fill material as part of any other activity.

Enclosed you will find a permit application form and a pamphlet that describes our regulatory program. If you have questions, please contact Elizabeth H. Brooks at (602) 640-5385 x 223. Please refer to file number 2002-01064-EHB in your reply.

Sincerely,

"ORIGINAL SIGNED BY"

Cindy Lester
Chief, Arizona Section
Regulatory Branch

Enclosure(s)

Copy Furnished: (w/o Enclosures)

✓ Lauren Weinstein, Project Manager
Environmental Planning Group (EPG)
4350 E. Camelback Rd., Suite G-200
Phoenix, Arizona 85018

Jane Dee Hull
Governor

Michael E. Anable
State Land
Commissioner

Arizona
State Land Department

1616 West Adams Street Phoenix, AZ 85007 www.land.state.az.us

June 25, 2002

Camille Champion
Bureau of Land Management
21605 North 7th Avenue
Phoenix, Arizona 85027

Re: 2800 (020)
AZA-31468

Dear Camille:

In response to your request for comments for the Hassayampa to Jojoba Transmission Project, please request that Gila Bend Power Partners or the responsible utility contact me regarding any additional right of way required over state land. We have already issued right of way from the power plant to the Jojoba Switchyard for 500 KV lines.

If you have any questions please contact me at 602-542-4041.

Sincerely,

James E. Gross
Right of Way Administrator

cc: Greg Novak

ADOT
Jane Dee Hull
Governor

Victor M. Mendez
Director

Arizona Department of Transportation
Intermodal Transportation Division
206 South Seventeenth Avenue Phoenix, Arizona 85007

Dick Wright
State Engineer

July 8, 2002

Mr. Rick Cooper
Acting Field Manager
United States Department of the Interior
Bureau of Land Management
Phoenix Field Office
21605 North 7th Avenue
Phoenix, AZ 85027

RE: Comments for The Proposed Right-of-Way for the Gila Bend Power Partners-Hassayampa to Jojoba Transmission Project

Dear Mr. Cooper:

The Environmental Planning Group of the Arizona Department of Transportation (ADOT) has reviewed the proposed action for the referenced project. This office does not have any comments at this time; however, we would like to review the draft Environmental Assessment when it becomes available.

Thank you for allowing the ADOT the opportunity to comment on the reference project.

Sincerely,

Roland Tang

Roland Tang, P.E.
Transportation Engineer
Environmental Planning Group
Environmental Technical Section

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • WWW.AZGFD.COM

GOVERNOR
JANE DEE HULL
COMMISSIONERS
CHAIRMAN, MICHAEL M. GOLIGHTLY, FLAGSTAFF
JOE CARTER, SAFFORD
SUSAN E. CHILTON, ARIVACA
W. HAYS GILSTRAP, PHOENIX
JOE MELTON, YUMA
DIRECTOR
DUANE L. SHROUFE
DEPUTY DIRECTOR
STEVE K. FERRELL

Jim Camille

July 8, 2002

RECEIVED
PDO
2002 JUL 11 AM 11:12
BUREAU OF LAND MGT
PHOENIX, ARIZONA

Mr. Rick Cooper
BLM Acting Field Manager
Phoenix Field Office
21605 North 7th Avenue
Phoenix, AZ 85027

Re: Proposed Right-of-Way for Gila Bend Power Partners – Hassayampa to Jojoba Transmission Project, Maricopa County

Dear Mr. Cooper:

The Arizona Game and Fish Department (Department) has reviewed the Bureau of Land Management's (BLM) request for comments, dated June 3, 2002, regarding the proposed Gila Bend Power Partners -- Hassayampa to Jojoba Transmission Project in Maricopa County. We provide the following comments for your consideration.

The Proposed Action involves construction of one 500 kV power line on steel lattice structures within a right-of-way that is approximately 200 feet wide and 20 miles in length. Because power lines and power poles present a potential electrocution hazard to raptors, we recommend construction of raptor-safe power line structures to minimize mortalities to the greatest extent possible.

We appreciate the opportunity to provide input during the development of the Environmental Assessment (EA). Please forward a copy of the draft EA to my attention at the letterhead address when it becomes available. If you have any questions regarding this letter, please contact me at (602) 789-3606.

Sincerely,

Angela McIntire

Angie McIntire
Project Evaluation Specialist

cc: Bill Knowles, Regional Habitat Specialist, Region IV
Bob Broscheid, Project Evaluation Program Supervisor

Paul E. Herndon, SR/WA
Facility Siting
Project Manager

Tel. 623-932-6729
Fax 623-932-6624
e-mail Paul.Herndon@APS.com

Mail Station 4609
PO Box 53933
Phoenix, Arizona 85072-3933

Friday, July 12, 2002

Mr. Rick Cooper
Acting Field Manager
Bureau of Land Management
Phoenix Field Office
21605 N. 7th Ave.
Phoenix, AZ 85027

RE: 2800 (020) AZA-31468, Gila Bend Power Partners 500kV Transmission Line Project

This letter is in response to your request for comments on the above-mentioned action. APS is one of several participants in the Valley Transmission System of which the existing Palo Verde to Kyrene 500kV transmission line and the proposed Palo Verde to Saguaro 500kV transmission line are a part. Both of these facilities were granted a Certificate of Environmental Compatibility (CEC) in cases 24 and 31 by the Arizona Corporation in the mid-1970's. The Kyrene 500kV transmission line was constructed in the early 1980's and is currently one of the major electric import resources from the Palo Verde Nuclear Generating Station to the Greater Phoenix Metropolitan Area. Salt River Project Agricultural Improvement and Power District (SRP) is the operating manager of Valley Transmission System.

Both of these facilities are in the vicinity of the proposed action under consideration by the BLM as requested by the Gila Bend Power Partners (GBPP). APS is very interested in any action that could ultimately place other electric transmission facilities in the vicinity or in the same "corridor" as our existing and planned transmission facilities. APS would hope to work closely with the BLM and the GBPP with regard to this proposed action. APS also hopes that any and all of our existing rights and privileges will be recognized and respected. Please keep us informed of the progress on the proposed action by communicating with me at the following address and telephone numbers:

APS
Paul Herndon
Project Manager
PO Box 53933, Mail Station 4609
Phoenix, AZ 85072-3933

Office 623-932-6729
Fax 623-932-6624
Email Paul.Herndon@APS.com

Thank you for the opportunity to comment.

Paul Herndon
Project Manager
Transmission and Facility Siting

P. O. Box 52025
Phoenix, AZ 85072-2025
(602) 236-5900
www.srp.gov

July 15, 2002

File: PVS – 04.04
Ref: TPGE - 0023

United States Department of the Interior
Bureau of Land Management
Phoenix Field Office
21605 North 7th Avenue
Phoenix, AZ 85027

RE: 2800 (020)
AZA-31468

Dear Mr. Cooper;

SRP is providing the enclosed comments in the context of our responsibilities as the Engineering and Operating agent for the Palo Verde Transmission System, Project Manager for the Palo Verde to Southeast Valley 500 kV Transmission Line Siting Study and project leader for the Central Arizona Transmission System (CATS) Study effort.

Several electric utilities within the state of Arizona, including SRP, as well as other entities with an interest in electrical energy issues, are involved in an ongoing effort to develop a long-range transmission service plan for central Arizona. The Central Arizona Transmission System (CATS) Phase 1 study report was the initial result of this effort. The CATS report has identified the need for additional transmission lines (two more 500 kV lines, in addition to the existing Palo Verde to Kyrene line) from the Palo Verde energy hub into central Arizona. The existing BLM utility corridor is crucial to the development of this long-range plan. SRP and the other state utilities have an interest in the efficient environmental and technical use of this corridor as it relates to the safe and reliable operations and maintenance of transmission systems to meet the electrical needs of Arizona consumers.

The siting of any transmission line in the subject corridor must take into consideration the necessary and appropriate electrical and other criteria (codes, clearances, etc.) to insure the safe operation and maintenance of the existing Palo Verde to Kyrene 500 kV line. Additional lines sited within the corridor should avoid crossing over the Palo Verde to Kyrene 500 kV line. Through coordination and with appropriate engineering and design considerations in the selection of an alignment for proposed transmission lines, this should be an achievable objective. Also, the siting of transmission lines within the corridor should address requirements for construction outages on the existing Palo Verde Transmission System.

The alignment or placement of additional transmission lines within the subject corridor should take into consideration the existing gas lines that are in the area.

The original siting work for the Palo Verde Transmission System (Arizona Certificate of Environmental Compatibility Case 24 and associated Federal EIS) included provisions for a future Palo Verde to Saguaro line. Even though the Palo Verde to Saguaro line has not been constructed, land rights in the form of easements on non-federal lands were obtained for future construction. Application for additional transmission facilities in the vicinity of the existing Palo Verde to Kyrene line will have to address these easements.

As Project Manager for the Palo Verde to Southeast Valley 500 kV Transmission Line Project, SRP will soon be filing a Right of Way Application with the BLM. SRP raises this point to insure awareness of the need to coordinate the ultimate configuration of transmission lines within the subject corridor. It is SRP's intent to minimize the overall land use and visual impacts of our Project, while achieving the best overall use of the corridor. Application for additional transmission facilities should provide for the safe operation and maintenance of all current and planned utilities located within the designated corridor.

We appreciate the opportunity to provide our comments. If you have any questions regarding the above, please contact me at 602-236-0971.

Sincerely

Robert Kondziolka

Robert Kondziolka
Manager, Transmission Planning

United States Department of the Interior
U.S. Fish and Wildlife Service
Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

In Reply Refer to:

AESO/SE
2-21-02-I-255

July 22, 2002

Memorandum

To: Acting Field Manager, Bureau of Land Management, Phoenix, Arizona (Attn: Rick Cooper)

From: Acting Field Supervisor

Subject: Hassayampa to Jojoba Transmission Project

This memo responds to your recent request for information on threatened or endangered species, or those that are proposed to be listed as such under the Endangered Species Act of 1973, as amended (Act), which may occur in your project area. The Arizona Ecological Service Field Office has posted lists of the endangered, threatened, proposed, and candidate species occurring in each of Arizona's 15 counties on the Internet. Please refer to the following web page for species information in the county where your project occurs: **http://arizonaes.fws.gov**

If you do not have access to the Internet or have difficulty obtaining a list, please contact our office and we will mail or fax you a list as soon as possible.

After opening the web page, find Arizona County/Species List on the main page. Then click on the county of interest. The arrows on the left will guide you through information on species that are listed, proposed, candidates, or have conservation agreements. Here you will find information on the species' status, a physical description, all counties where the species occurs, habitat, elevation, and some general comments. Additional information can be obtained by going back to the main page. On the left side of the screen, click on Document Library, then click on Documents by Species, then click on the name of the species of interest to obtain General Species Information, or other documents when that may be available. Click on the cactus icon to view the desired document.

Please note that your project area may not necessarily include all or any of these species. The information provided includes general descriptions, habitat requirements, and other information for each species on the list. Under the General Species Information, citations for the of Federal Register (FR) are included for each listed and proposed species. The FR is available at most public libraries. This information should assist you in determining which species may or may not occur within your project area. Site-specific surveys could also be helpful and may be needed to verify the presence or absence of a species or its habitat as required for the evaluation of proposed project-related impacts.

Endangered and threatened species are protected by Federal law and must be considered prior to project development. If the action agency determines that listed species or critical habitat may be adversely affected by a federally funded, permitted, or authorized activity, the action agency will need to request formal consultation with us. If the action agency determines that the planned action may jeopardize a proposed species or destroy or adversely modify proposed critical habitat, the action agency will need to enter into a section 7 conference. The county list may also contain candidate species. Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend that they be considered in the planning process in the event that they become listed or proposed for listing prior to project completion.

If any proposed action occurs in or near areas with trees and shrubs growing along watercourses, known as riparian habitat, we recommend the protection of these areas. Riparian areas are critical to biological community diversity and provide linear corridors important to migratory species. In addition, if the project will result in the deposition of dredged or fill materials into waterways, we recommend you contact the Army Corps of Engineers which regulates these activities under Section 404 of the Clean Water Act.

The State of Arizona protects some plant and animal species not protected by Federal law. We recommend you contact the Arizona Game and Fish Department and the Arizona Department of Agriculture for State-listed or sensitive species in your project area.

For future projects, you do not need to contact our office to obtain a project number. However, for additional communications regarding this project, please refer to consultation number 2-21-02-I-255. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. If we may be of further assistance, please feel free to contact Tom Gatz for projects in northern Arizona or along the Colorado River (x240) or Sherry Barrett for projects in southern Arizona.

Jacqueline Horan

for Steven L. Spangle

cc: John Kennedy, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

W:\Cathy Gordon\species list letters\blm Hassayampa to Jojoba Transmission Project.wpd:cgg

Thomas R. Buick, P.E.
Chief Public Works Officer,
Transportation Director & County Engineer

July 23, 2002

DEPARTMENT OF TRANSPORTATION

Mr. Rick Cooper
Acting Field Manager - Phoenix Field Office
United States Department of the Interior
Bureau of Land Management
21605 North 7th Avenue
Phoenix, AZ 85027

Subject: Proposed Gila Bend Power Partners – Hassayampa to Jojoba Transmission Project

Dear Mr. Cooper:

Thank you for the opportunity to comment on this proposed right-of-way request. We have identified four (4) areas of concern we ask that you to take into consideration.

First, the Arizona Department of Transportation (ADOT) has concluded a corridor study for the widening of State Route 85 from Interstate 10 to Gila Bend. The widening improvements to State Route 85 will be phased over a 5 to possibly a 10-year period. Additional phasing and scheduling information is available from ADOT's web site at www.dot.state.az.us.

Second, Maricopa County Department of Transportation (MCDOT) has a long-range plan to extend Riggs Road from Rainbow Valley Road west, to connect with SR 85. The exact location of the connection has not been formally determined. We are concentrating on a connection to SR85 north of the existing landfill (east side of SR85) and south of the Rainbow Wash. A Riggs Road Candidate Assessment Report (CAR) was completed in June 2000. No construction timeline was determined. A copy of this CAR is available for your perusal if necessary.

Third, maintaining (or improving) aesthetic values is an integral component of MCDOT's environmental evaluation process. Due to the historic nature of the Gillespie Dam Bridge, MCDOT would encourage a site-specific visual analysis be completed to identify and select appropriate mitigation measures that would lessen any direct or indirect impacts, and help avoid cumulative impacts, to the view shed. We understand that an EA will be prepared for this project. If possible, we would like to receive a copy of the draft and or final EA for review and comment.

Lastly, since the proposed facility will traverse through relatively undeveloped areas, the future road network is predominately unknown at this time. However, since our existing and future road network is based mainly on the grid system, we ask that your applicant be cognizant of future section line road potential. When the transmission line rights-of-way traverse in a north-south or east-west direction we ask that the right-of-way be located a minimum of 65-feet from the section lines, where practical, and when the transmission line rights-of-way traverse on an alignment other than north-south or east-west we ask that the poles, towers or other appurtenances be located a minimum of 65-feet from the section lines, where practical. This will hopefully minimize future road conflicts and is greatly appreciated.

If you have any questions regarding this matter, or require clarification on any point contained in this letter, please feel free to contact Mr. Bob Woodring in our Transportation Planning Division at 602-506-1766 or by e-mail at bobwoodring@mail.maricopa.gov.

Sincerely,

Michael W. Sabatini, P. E.
Division Manager
Transportation Planning Division